
in accordance with Article 4(2) of MB Decision 01-2022

Detailed specifications and 1st set of acceptable means of compliance and guidance material supporting the new regulatory framework on the conformity assessment of ATM/ANS systems and ATM/ANS constituents

RMT.0161 (SUBTASK 3) and RMT.0524 (SUBTASKS 3 AND 4)

EXECUTIVE SUMMARY

These Decisions establish the detailed specification (DSs) as well as the first set of the acceptable means of compliance (AMC) and guidance material (GM) supporting the application of the conformity assessment framework for air traffic management/air navigation services systems and air traffic management/air navigation services constituents (hereafter ‘ATM/ANS equipment’).

Due to the novelty of the subject, it is important to provide the necessary means for the application of the above-mentioned framework.

This regulatory material focuses on measures considered essential during the transitional period in the short term, in particular:

— the DSs and AMC and GM for ATM/ANS (ground) equipment (DS-GE.CER/DEC) subject to certification and declaration of design compliance;
— the DSs for ATM/ANS equipment subject to statement of compliance (DS-GE.SoC);
— the issue of the statement of compliance (SoC) by ATM/ANS providers and their oversight;
— the measures for the application of the common requirements on aircraft equipment and the operating procedures related to the use of the single European sky (SES) airspace; and
— the measures for the application of the requirements for the ATM/ANS providers when introducing changes to their functional system as regards the ATM/ANS equipment.

This regulatory material is expected to facilitate the effective modernisation of the European air traffic management network (EATMN), ensuring more streamlined conformity assessment mechanisms and increased harmonisation and interoperability of ATM/ANS equipment brought to the EU market.

REGULATION(S) TO BE AMENDED/ISSUED

N/A

ED DECISIONS TO BE ISSUED/AMENDED/REPEALED

— ED Decisions — AMC/GM/DSs to support the implementation of the regulations proposed with Opinion No 01/2023
— ED Decision 2017/001/R — AMC/GM to Part-ATM/ANS.OR
— ED Decision 2020/014/R — AMC & GM to Commission Implementing Regulation (EU) No 1207/2011 (the surveillance performance and interoperability (SPI) Regulation)

AFFECTED STAKEHOLDERS: Organisations involved in the design and/or production of ATM/ANS equipment, ATM/ANS providers, aircraft operators, aerodrome operators where applicable, national competent authorities (NCAs), and EASA.

WORKING METHODS

Development
By EASA with external support

Impact assessment(s)
Light

Consultation
NPA — Public Workshop — Focused

RELATED DOCUMENTS / INFORMATION

— ToR RMT.0161; NPA 2022-09; NPA 2022-107; Opinion No 01/2023; NPA 2023-05

PLANNING MILESTONES: see latest European Plan for Aviation Safety (EPAS) edition
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1. About these Decisions

1.1. How this regulatory material was developed

The European Union Aviation Safety Agency (EASA) identified the need for certification or declaration of certain ATM/ANS equipment as provided for in Regulation (EU) 2018/11391 (the EASA Basic Regulation). Recognising that in the future the provision of ATM/ANS will rely more heavily on new digital technologies and ATM/ANS systems than today, action at European Union level is required to ensure the safety and interoperability of such systems. Moreover, ATM/ANS systems and ATM/ANS constituents (hereafter ‘ATM/ANS equipment’) are key and integral elements of the European ATM network (EATMN) and form a fundamental component to ensure safe flight operations within the single European sky (SES) airspace (as described in Chapter 2). EASA published Opinion No 01/2023 on the basis of which the European Commission adopted the new conformity assessment framework for ATM/ANS equipment.

This rulemaking activity is a subsequent step of the newly established framework for ATM/ANS equipment.

EASA developed the regulatory material in question in line with the Basic Regulation and the Rulemaking Procedure2, as well as in accordance with the objectives and working methods described in the ToR3-4 for RMT.0161 and RMT.0524. Thereafter, the draft regulatory material was publicly consulted through NPA 2023-055 and through a focused consultation workshop held on 4 July 2023.

EASA developed this regulatory material with the support of Rulemaking Group (RMG) RMT.0161. As regards the development of the DSS, the inputs of an expert group were considered, in particular the inclusion of extended arrival management (EAMAN) and departure management (DMAN). Both the RMG and the expert group were composed of representatives of national supervisory authorities (NSAs), air navigation services providers (ANSPs) and industry.

EASA reviewed the comments received in the context of the aforementioned consultation means and duly considered them for the preparation of the regulatory material presented here.

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2 EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the ‘Rulemaking Procedure’. See MB Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material (‘Rulemaking Procedure’), and repealing Management Board Decision No 18-2015 [https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-01-2022-rulemaking-procedure-repealing-mb].


1.2. The next steps

Due to the intensive public consultation of NPA 2023-05 that closed on 2 August 2023 and the 1 246 comments received from 50 organisations and individuals representing all the aviation domains, EASA decided to adopt a stepped-approach publication to achieve the benefits in the implementation of the framework.

In recognition of the importance of the timely issuance of the DSs and AMC & GM, EASA is proceeding with a gradual prioritised publication of the associated Decisions with a view to effectively supporting the implementation of the new framework.

Therefore, this regulatory material addresses the DSs and the most essential set of AMC & GM related to measures during the transitional period; in particular, the issue of SoC by ATM/ANS providers and their oversight.

The publication of this regulatory material will be followed by a second set of AMC & GM resulting from the referenced consulted NPA 2023-05 and will pertain to:

- the completion of the AMC & GM associated with Commission Delegated Regulation (EU) 2023/1768\(^6\) for the certification and declaration of ATM/ANS equipment; and

- the AMC & GM associated with Commission Implementing Regulation (EU) 2023/1769\(^7\) of 12 September 2023 for the approval of organisations involved in the design or production of ATM/ANS equipment (DPO approval).

This approach considers the tight time schedule imposed by the EASA Basic Regulation (i.e. 12 September 2023) and would facilitate the smooth implementation of the new conformity assessment framework.

In the context of these Decisions, EASA will provide feedback to the commentators and information to the public on who engaged in the related regulatory process and how the relevant comments received were considered for the finalisation of the DSs and AMC & GM.

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2. **In summary — why and what**

2.1. **Why we need to act**

The Basic Regulation lays down interoperability requirements for the EATMN and mandates the development of the related delegated and implementing acts as regards the certification or declaration of ATM/ANS equipment as well as of the organisations involved in their design, production, and maintenance.

The interoperability Regulation (Regulation (EC) No 552/2004\(^8\)) was repealed by the Basic Regulation, whose Article 139 establishes the transitional provisions whereby certain articles of said interoperability Regulation and its Annexes III and IV remain applicable until the date of application of the new framework, and in any case not later than 12 September 2023.

In this context, the new regulatory framework on the ATM/ANS equipment proposed with EASA Opinion No 01/2023 was adopted by the European Commission. The new framework consists of five Regulations:

- Commission Delegated Regulation (EU) 2023/1768 of 14 July 2023 laying down detailed rules for the certification and declaration of air traffic management/air navigation services systems and air traffic management/air navigation services constituents;
- Commission Implementing Regulation (EU) 2023/1769 of 12 September 2023 laying down technical requirements and administrative procedures for the approval of organisations involved in the design or production of air traffic management/air navigation services systems and constituents and amending Implementing Regulation (EU) 2023/203;

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\(^9\) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1770&qid=1697455922313

\(^10\) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1771&qid=1697455998114

The new regulatory framework enables the conformity assessment of ATM/ANS equipment by means of certification or declaration(s), as well as by the approval of organisations involved in the design and/or production of such equipment.

The DSs as well as the first set of AMC & GM are required to support the application of the new regulatory framework on the conformity assessment of ATM/ANS equipment.

The ATM/ANS equipment addressed through the DSs associated with certification/declaration of design compliance by DPOs (DS-GE.CER/DS-GE.DEC) and with statement of compliance by ATM/ANS providers or approved DPOs on their behalf (DS-GE.SoC) is necessary to:

- complete the transposition of the SES interoperability Regulations as proposed with Opinion No 01/2023 (for further details, please refer to Section 2.1 thereof). This transposition also results from the recast of the requirements specified in the Community Specifications published in accordance with Article 4 of Regulation (EC) No 552/2004; and
- facilitate the implementation of Commission Implementing Regulation (EU) 2021/116 (the Common Project 1 Regulation (CP1)).

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. The ED Decisions presented here are expected to contribute to achieving these overall objectives by addressing the issues described in Section 2.1.

- More specifically, with the regulatory material presented here, EASA intends to support the application of:
  - Article 6 as well as Article 7 of Commission Delegated Regulation (EU) 2023/1768 of 14 July 2023 laying down detailed rules for the certification and declaration of air traffic management/air navigation services systems and air traffic management/air navigation services constituents;
  - Commission Implementing Regulation (EU) 2023/1770 of 12 September 2023 laying down provisions on aircraft equipment required for the use of the Single European Sky airspace and operating rules related to the use of the Single European Sky airspace; and
  - the amendments, introduced through Commission Implementing Regulation (EU) 2023/1771, to Regulation (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight.

In this context, the specific objectives of the AMC & GM and DSs are to:

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ensure that the relevant safety, security, performance, and interoperability objectives are met, supporting efficient operations of the EATMN, in compliance with the applicable requirements of the Basic Regulation and of the delegated and implementing acts adopted on its basis;

— provide a common understanding of the new requirements;

— support the effective and harmonised attestation and conformity assessment and oversight of ATM/ANS equipment; and

— support the application by all affected/regulated parties, while promoting and enabling the development and implementation of new technologies and allocating clear responsibilities to the various actors involved in this activity.

Further details on the objectives of this regulatory framework are explained in Section 2.2 of EASA Opinion No 01/2023.

2.3. How we want to achieve it — overview of the Decisions

To facilitate the application of the new regulatory framework on ATM/ANS conformity assessment, this regulatory material encompasses:

— three new ED Decisions:

  — one issuing the set of DSs, including the associated AMC & GM, for:

    — ATM/ANS (ground) equipment subject to certification or declaration of design compliance by DPOs (DS GE.CER/DS GE.DEC) published as Book 1; and

    — ATM/ANS (ground) equipment subject to SoC by ATM/ANS providers or a DPO on their behalf (DS GE.SoC) published as Book 2; and

  — two ED Decisions issuing the AMC & GM associated with:

    — Article 6 ‘Statement of compliance’ and Article 7 ‘Transitional provisions’ of Commission Delegated Regulation (EU) 2023/1768 on the certification and declaration(s) of ATM/ANS equipment; and

    — Commission Implementing Regulation (EU) 2023/1770 on common requirements on aircraft equipment and operating procedures for the use of the single European sky airspace; and

  — one ED Decision amending ED Decision 2017/001/R to address the new requirements laid down in Regulation (EU) 2023/1771 of 12 September 2023 amending Implementing Regulation (EU) 2017/373 as regards ATM/ANS equipment.

2.3.1. Book 1 ‘DS-GE.CER/DEC’ — DSs and associated AMC & GM for ATM/ANS ground equipment subject to certification or declaration of design compliance by DPOs

The DSs for ATM/ANS equipment subject to certification or declaration of design compliance by DPOs (DS-GE.CER/DEC) are structured into three parts.

Part 1 addresses the ‘General’ specifications that are applicable to all ATM/ANS equipment subject to both certification and declaration, as defined by Regulation (EU) 2023/1768.
Parts 2 and 3, applicable to certification and declaration respectively, are further divided into ‘Subparts’ addressing specific ATM/ANS equipment associated with the functions as per point 3 of Annex VIII to the Basic Regulation, as illustrated in Figure 1 of this Section.

For the specific ATM/ANS equipment within the ‘Subparts’, the functional, performance and interface specifications are specified in a technology-agnostic manner. To facilitate compliance with these specified specifications, the new associated AMC & GM, primarily list published industry standards from standards development organisations or transpose requirements currently contained in the Community Specifications developed under the SES regulatory framework.

Such ATM/ANS equipment is:

— subject to certification
  — Flight data processing (FDP)
  — Advanced surface movement guidance and control system (A-SMGCS)
  — Data link applications
  — Surveillance data processing (SDP)
  — Data communications (air-ground)
  — Voice communications (air-ground)

— subject to declaration of design compliance
  — ATS message handling system (AMHS)
  — System wide information management (SWIM)
  — Flight message transfer protocol (FMTP)
  — Mode S ground station
  — ADS-B
2.3.2. Book 2 ‘DS-GE.SoC’ — DSs and associated AMC & GM for ATM/ANS ground equipment subject to SoC by ATM/ANS providers or approved DPOs

The DSs for ATM/ANS equipment subject to statement of compliance (DS-GE.SoC) are structured into two ‘Parts’.

Part A addresses the (technical) specifications that are applicable to all ATM/ANS equipment subject to SoC, as defined in Regulation (EU) 2023/1768.

Part B addresses the specific ATM/ANS equipment associated with the functions as per point 3 of Annex VIII to the Basic Regulation, as illustrated in Figure 2.

For ATM/ANS equipment subject to SoC, either the appropriate published industry standards from standards development organisations are listed, or requirements currently contained in the Community Specifications developed under the SES regulatory framework are transposed.

The proposal includes the following ATM/ANS equipment:

- Aeronautical information management system (AIM)
- Local ASM support system
- ATFM system
- MET data distribution
- Extended arrival management (EAMAN)
- Departure management (DMAN)
It is acknowledged that EAMAN and DMAN are ATM/ANS equipment that primary enables efficient approach and departure sequencing thus improving (local) flow management. Therefore, EAMAN and DMAN are categorised within the ATM/ANS equipment subject to statement of compliance as defined by Article 6 of Regulation (EU) 2023/1768 based on the NPA 2023-05 consultation feedback received.

Figure 2: DS-GE.SoC structure

2.3.3. AMC & GM to Commission Delegated Regulation (EU) 2023/1768 on the certification and declaration of design compliance of air traffic management/air navigation services systems and air traffic management/air navigation services constituents

Regulation (EU) 2023/1768 establishes the new framework on the conformity assessment of ATM/ANS equipment taking into account the nature and the risk of the operation or functionality enabled by the particular ATM/ANS equipment as per point 3 of Annex VIII to the Basic Regulation. It introduces three different instruments based on the principles established by the Basic Regulation:

- Certification by EASA of ATM/ANS equipment based on detailed specifications (Article 4);
- Declaration of design compliance by an approved DPO, for ATM/ANS equipment based on detailed specifications (Article 5); and
- Statement of compliance (SoC) by the ATM/ANS provider or by an approved DPO acting on behalf of the ATM/ANS provider, confirming that the equipment complies with the technical standards listed in DSs (Article 6).
To support the smooth application of the proposed new regulatory framework shortly after its applicability date, this regulatory material addresses:

— AMC & GM associated with Article 6 to:
  — illustrate the role and means of compliance with the required activities by the regulated parties;
  — address the SoC, the template, and the activities to be performed before the SoC is issued; and
  — address the cases in which a reissue of the SoC is required, i.e. management of minor and major changes of the ATM/ANS equipment subject to SoC; and
— an essential set of AMC & GM relating to the transitional provisions and the set of information to be provided by the competent authority to the Agency for the purpose of evaluation of the legacy systems.

2.3.4. AMC & GM to Commission Implementing Regulation (EU) 2023/1770 on common requirements on aircraft equipment and operating procedures for the use of the single European sky airspace

This regulatory material provides a reference to the appropriate airworthiness requirements, primarily defined in the Certification Specification for Airborne Communications, Navigation and Surveillance (CS-ACNS), that are necessary to comply with the ATM/ANS equipment carriage requirements. In addition, guidance is provided with respect to information to be included in the flight plan as regards the equipage and operational status of the aircraft.

Commission Implementing Regulation (EU) 2023/1770 repeals, amongst others, Commission Implementing Regulation (EU) No 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky. Therefore, the associated ED Decision 2020/014/R is also repealed.

2.3.5. Amendment to ED Decision 2017/001/R as regards ATM/ANS equipment

This regulatory material includes a set of AMC and GM primarily facilitating the application of the requirements on the ATM/ANS providers’ responsibilities concerning the changes to the functional system that are stipulated in point ATM/ANS.OR.A.045. Said AMC and GM cover the ATM/ANS provider’s activities before integrating the ATM/ANS equipment into the functional system.

Some of the AMC and GM have been developed based on the principles previously stipulated in Annex VIII to the repealed Regulation (EU) No 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky, to address the verification and the required checking activities before ATM/ANS equipment being deployed.

2.4. What are the stakeholders’ views

The comments received via the public consultation of NPA 2023-05 and the workshop held on 4 July 2023 essentially contributed to the improvement of the regulatory material introduced with these ED Decisions.
Besides the supporting comments, the feedback received advised EASA to further consider the transposition of the provisions from the SES IOP Regulations repealed with the new ATM/ANS equipment framework. The other subjects of general nature and addressed by several commentators concerned particular topics like the classification of minor/major changes of ATM/ANS equipment, activities before the issue of the SoC and their oversight as well as the transitional measures.

In addition, a high number of responses were received to the specific questions addressed to stakeholders via the NPA 2023-05 proposal, for which amendments were required and certainly assisted in the development of these Decisions. The most significant feedback concerns the DSs for ATM/ANS equipment subject to certification or declaration of design compliance by the DPO as well as the classification of changes which can be introduced without a new product assessment.

The comments received and EASA’s responses to them will be presented in Comment-Response Document (CRD) 2023-05 after the issue of the second set of AMC & GM resulting from the NPA 2023-05 consultation considering the time constraints.
3. What are the expected benefits and drawbacks of the regulatory material

The regulatory material introduced with these ED Decisions complements the regulatory framework on the new conformity assessment framework consisting of the five referenced Commission Delegated and Implementing Regulations (EU) 2023/1768, 2023/1769, 2023/1770, 2023/1771 and 2023/1772.

The main benefits of the regulatory material introduced are that:

— when the regulated parties make use of it, they can demonstrate compliance with the applicable requirements;
— it increases efficiency in certification and oversight;
— it facilitates harmonisation in the implementation of the regulatory framework on the conformity assessment.

No drawbacks are expected.
4. Monitoring and evaluation

EASA will monitor whether the intended objectives will be achieved as part of the monitoring and evaluation actions described in Chapter 5 of EASA Opinion No 01/2023.

As this regulatory material introduces the first set of DSs and AMC & GM to enable the certification and declaration scheme for certain ATM/ANS equipment that will apply to new and modified (e.g. upgraded) ATM/ANS equipment designs, EASA will monitor their implementation as follows:

(a) by evaluating feedback from future ATM/ANS equipment certification projects; and

(b) in the long term, by evaluating the trend of the issues encountered with the ATM/ANS equipment during the investigation of accidents and incidents, as well as other feedback from ATM/ANS equipment manufacturers, ATM/ANS service providers, and oversight authorities.

Further to monitoring, an evaluation might be performed in the long term but in any case, not earlier than 5 years from the completion of the transition period stipulated for the new conformity assessment framework; this evaluation would require the availability of experience gained from several ATM/ANS equipment certification projects and the issuance of SoCs by ATM/ANS service providers as well as the oversight of the SoC by their competent authorities.

Feedback on item (b) above would be available once new and modified (e.g. upgraded) ATM/ANS equipment designs have entered into service and sufficient experience has been gained with their operation.
5. Proposed actions to support implementation

In order to support affected stakeholders in the implementation of the regulatory material included in the ED Decisions, EASA plans to take the following actions:

— Focused communication for Advisory Body meeting(s) (MAB/SAB/TeB/TEC/COM)
  (Advisory Body members)

— Detailed explanation with clarifications on the EASA website
  (Primarily targeted audience: industry, competent authorities)

— Dedicated thematic workshop/session
  (Primarily targeted audience: industry, competent authorities)
6. References

6.1. Related EU regulations


— Commission Implementing Regulation (EU) 2023/1769 of 12 September 2023 laying down technical requirements and administrative procedures for the approval of organisations involved in the design or production of air traffic management/air navigation services systems and constituents and amending Implementing Regulation (EU) 2023/203 (OJ L 228, 15.9.2023, p. 18)


6.2. Related EASA decisions

— ED Decision 2017/001/R ‘AMC/GM to Regulation (EU) 2017/373’ | ‘Common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight’
— ED Decision 2020/014/R ‘AMC & GM to Commission Implementing Regulation (EU) No 1207/2011 (the surveillance performance and interoperability (SPI) Regulation)’

6.3. Other references


