

ARINC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM 19-013A**
- This APIM proposes development of **Supplement 7 to ARINC Specification 810: Definition of Standard Interfaces for Galley Insert (GAIN) Equipment Physical Interfaces**
- 1.1 Name of Originator and/or Organization**
Christian Auris, Airbus, Co-Chairman, Galley Inserts (GAIN) Subcommittee
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**
Galley Inserts (GAIN) Subcommittee
Co-Chairman: Christian Auris, Airbus
Co-Chairman: Adam Cha, Boeing
- 2.2 Support for the Activity (as verified)**
Airlines:
Airframe Manufacturers: Airbus, Boeing (TBC)
Suppliers:
Others:
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**
Airlines: Lufthansa, Virgin Atlantic, Air Canada
Airframe Manufacturers: Airbus, Boeing (TBC)
Suppliers:
Others:
- 2.4 Recommended Coordination with other groups**
The following AEEC Subcommittee activities are relevant to this topic:
- SAI Subcommittee
- 3.0 Project Scope (why and when standard is needed)**
- 3.1 Description**
The current published version of **ARINC Specification 810-6: Definition of Standard Interfaces for Galley Insert (GAIN) Equipment Physical Interfaces** defines the physical dimensions for electrical and non-electrical galley inserts. The standard defines the dimensional requirements for galley compartments and inserts. To enable future applications related to catering processes (e.g. inventory management), sensors will be required to identify the content of the galley compartment. To enable cross fleet operations, it will be required to standardize positions and technology to be used to provide good service to the operators.
~~The definition of an Extended Size 2 will be added, which will fill the need for extended ovens following the ARINC 810/812A Specification. Newer aft galleys~~

~~can support these deeper ovens, thus creating savings in weight, space, and cost.~~

3.2 Planned usage of the ARINC Standard

Note: New airplane programs must be confirmed by the aircraft manufacturer prior to completing this section.

New aircraft developments planned to use this specification yes no

Airbus: **TBD**

Boeing: **TBD**

Other: **TBD**

Modification/retrofit requirement yes no

Specify: (aircraft & date)

Needed for airframe manufacturer or airline project yes no

Specify: (aircraft & date)

Mandate/regulatory requirement yes no

Program and date: (program & date)

Is the activity defining/changing an infrastructure standard? yes no

Specify ARINC 810

When is the ARINC standard required? Supplement 7 to ARINC 810 is expected by ~~July 2021~~ May 2023.

What is driving this date? Aircraft development schedules.

Are 18 months (min) available for standardization work? yes no

If NO please specify solution: _____

Are Patent(s) involved? yes no

If YES please describe, identify patent holder: _____

3.3 Issues to be Worked

Identify the types of sensors required for galley inventory tracking.

Define positions for sensors in the compartments for non-electrical inserts.

Define positions for identifiers on the non-electrical inserts (e.g. Trolley/Standard container).

~~Add definitions for Extended Size 2 GAINs (improvement proposal).~~

3.4 Security Scope

Is Cyber Security Impacted (if yes, check box(es) below) yes no

Aircraft Control Domain yes no

Airline Information Services Domain yes no

Pax Information and Entertainment Systems yes no

Other _____ yes no

4.0 Benefits

4.1 Basic Benefits

Operational enhancements yes no

For equipment standards:

(a) Is this a hardware characteristic? yes no

(b) Is this a software characteristic? yes no

(c) Interchangeable interface definition? yes no

(d) Interchangeable function definition? yes no

If not fully interchangeable, please explain: _____

Is this a software interface and protocol standard? yes no

Specify: _____

Product offered by more than one supplier yes no

Identify: Safran, Diethelm Keller, Korita, Collins Aerospace, AIM, Bucher

4.2 Specific Project Benefits

GAIN standards provide a common distribution system for Airbus and Boeing multi- and single-aisle aircraft. These standards focus on standardized interfaces that are beneficial to the airlines, airframe manufacturers, and suppliers.

4.2.1 Benefits for Airlines

This standard will provide several benefits to Airlines:

- Equipment interoperability between suppliers.
- Reduction in development cost, improved reliability, and therefore reduced cost for the airlines.

4.2.2 Benefits for Airframe Manufacturers

This standard will provide several benefits to Airframe manufacturers:

- Equipment interoperable between suppliers.
- Flexibility and reduced costs by working from the same set of guidelines.
- Reduction of time and cost for new developments due to reuse of proven solutions.

4.2.3 Benefits for Avionics Equipment Suppliers

This standard will provide several benefits to Equipment Suppliers:

- Eliminates the need to design custom provisions for each installation.
- Reduction of time and cost for new developments due to reuse of proven solutions.

5.0 Documents to be Produced and Date of Expected Result

Supplement 7 to ARINC Specification 810: Definition of Standard Interfaces for Galley Insert (GAIN) Equipment Physical Interfaces. A mature document is expected by May 2023⁴.

5.1 Meetings and Expected Document Completion

The following table identifies the number of meetings and proposed meeting days needed to produce the documents described above.

Activity	Mtgs	Mtg-Days (Total)	Expected Start Date	Expected Completion Date
Supplement 7 to ARINC 810	1* Bi-weekly Web Conferences	3 TBD	October 2019 21	May 2021 3

Please note the number of in-person meetings and the number of meeting days to be supported by the ARINC IA Staff.

Please add a statement describing the frequency of web conferences.

6.0 Comments

6.1 Expiration Date for the APIM

May 2023~~4~~

***Completed forms should be submitted to Paul Prisaznuk (pjp@sae-itc.org)
AEEC Executive Secretary & Program Director***