

## ARINC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM [23-xxx](#)**  
**ARINC Specification 812A:** Standard Data Interfaces for Galley Insert (GAIN), Digital Interface Update for Health Management Messages, Functionality, and System Integration
- 1.1 Name of Originator and/or Organization**  
Galley Insert (GAIN) Subcommittee  
Airbus/Boeing, Co-Chairs
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Co-Chairmen**  
Galley Insert (GAIN) Subcommittee  
Christian Auris, Airbus  
William Baltra, Boeing
- 2.2 Support for the activity (as verified)**  
Airlines: Lufthansa, United Airlines (TBC)  
Airframe Manufacturers: Airbus, Boeing  
Suppliers: [Collins Aerospace](#), [Safran](#)  
[TBC](#): Iacobucci HF Electronics, IPECO, Jamco  
Others:
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**  
Airlines: TBD  
Airframe Manufacturers: Airbus, Boeing  
Suppliers: [Collins Aerospace](#), [Safran](#)  
[TBC](#): Iacobucci HF Electronics, IPECO, Jamco  
Others:
- 2.4 Recommended Coordination with other groups**  
CAN Working Group
- 3.0 Project Scope (why and when standard is needed)**
- 3.1 Description**  
ARINC Specification 812A defines interfaces to functional catering components (i.e., beverage makers, ovens, refrigerators, trash compactors, etc.), specifically the Controller Area Network (CAN) data interfaces and data content to be considered between all galley equipment using a Galley Data Bus.  
ARINC 812A includes two parts, Part 1 includes the definition of CAN data interfaces and protocols for digital galley equipment and Part 2 includes the definition of verification test procedures for ARINC 812A Part 1 bus protocol implementation.

[During the work APIM 17-007B it has](#) led to the identification of changes and corrections that should be [incorporated in an update of the ARINC812A standard](#). This project will resume the important work of the GAIN Subcommittee. Specifically, the work will focus on the following:

- ⊖ Development of Supplement 4 to ARINC Specification 812A Part 1: Standard Data Interface for Galley Insert (GAIN) Equipment, CAN Communications, which will:
  - [Review and update state transition models, especially with respect to remote operations \(there is an emphasis from the airframers to standardize remote operations\).](#)
  - [For every requirement in Part 1, assign a unique identifier for traceability, Part 1 and Part 2.](#)
  - Address data security and provide guidance as needed.
  - Update the XML and XSD support files as required.
  - [Develop improvements to the standard document structure \(re-organization of topics\)](#)
  - [Define system behavior when CAN Bus disturbances are happening so there are no negative effects.](#)

Development of Supplement 1 to **ARINC Specification 812A Part 2: Standard Data Interface for Galley Insert (GAIN) Equipment, CAN Communications, Verification, and System Test Guidance**, which will update the verification test procedures based on the changes identified in Supplement 4 to ARINC 812A Part 1. Development of Part 2 will [be accomplished in parallel with](#) Supplement 4 to ARINC Specification 812A Part 1.

⊖ [This new APIM will close 17-07B and the work on 812A P2 will be moved to this new APIM.](#)

### 3.2 Planned usage of the envisioned specification

New aircraft developments planned to use this specification	yes <input checked="" type="checkbox"/> no <input type="checkbox"/>
Airbus: all new	
Boeing: 777X	
Modification/retrofit requirement	yes <input type="checkbox"/>
no <input checked="" type="checkbox"/>	
Needed for airframe manufacturer or airline project	yes <input checked="" type="checkbox"/>
no <input type="checkbox"/>	
Specify: driven by the need to provide common definitions for the airplane programs and retrofit programs	
Mandate/regulatory requirement	yes <input type="checkbox"/>
no <input checked="" type="checkbox"/>	
Program and date: No mandate	
Is the activity defining/changing an infrastructure standard?	yes <input type="checkbox"/>
no <input checked="" type="checkbox"/>	
Specify:	
When is the ARINC Standard required? Per aircraft program	
What is driving this date? Aircraft Development Schedules	
Are 18 months (min) available for standardization work?	yes <input checked="" type="checkbox"/>
no <input type="checkbox"/>	

If NO, please specify solution: Not applicable  
Are Patent(s) involved? yes   
no

If YES please describe, identify patent holder: Not applicable

### 3.3 **Issues to be worked**

⊖ Review and update state transitions models, especially with respect to remote operations

[Address data security and provide guidance as needed.](#)

[Update the XML and XSD support files as required.](#)

[Develop improvements of the standard document structure \(re-organization of topics\)](#)

## 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

Product offered by more than one supplier yes   
no

Identify: Collins Aerospace, Safran, IPECO, Iacobucci HF Electronics, Jamco

### 4.2 **Specific project benefits (Describe overall project benefits.)**

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

#### 4.2.1 **Benefits for 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**

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**

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 [4](#) to ARINC 812A Part 1  
Supplement 1 to ARINC 812A Part 2

### **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.

<i>Activity</i>	<i>Virtual Mtgs</i>	<i>F2F Mtgs (Total)</i>	<i>Expected Start Date</i>	<i>Expected Completion Date</i>
<i>Supp 4 to ARINC 812A Part 1</i>	22	6 (18)	May 2023	May 2026
<i>Supp 4 to ARINC 812A Part 2</i>				

**6.0        Comments**

None.

**6.1        Expiration Date for this APIM**

[May 2026](#)

***Completed forms should be submitted to [aeec@sae-itc.org](mailto:aeec@sae-itc.org) (Sam Buckwalter) AEEC Executive Secretary***