ARINC IA Project Initiation/Modification (APIM)

1.0 Name of Proposed Project APIM 15-002

GAIN Size 6 Definition

Supplement 5 to ARINC Specification 810: Definition of Standard Interfaces for Galley Inserts

2.0 Subcommittee Assignment and Project Support

2.1 Identify AEEC Group

Galley Insert (GAIN) Subcommittee

2.2 Support for the activity

Airlines:

Airframe Manufacturers: Airbus, Boeing

Suppliers: JAMCO

Others: [TBD]

2.3 Commitment for resources

Airlines:

Airframe Manufacturers: Airbus, Boeing

Suppliers:

Others:

2.4 Chairmen:

Co-Chairmen: Scott Coburn, Boeing and Ralph Schnabel, Airbus

2.5 Recommended Coordination with other groups

NA

3.0 Project Scope

The goal of the GAIN Subcommittee is to standardize (1) the physical dimensions, (2) electrical interfaces, (3) qualification testing, and (3) communication protocols for Galley Inserts.

Multiple GAIN suppliers have initiated development of microwave oven inserts for both forward fit and retrofit applications. However, there are currently no standard dimensions or interfaces for these units that are compatible with existing ARINC 810 interfaces. A standard ARINC Size 6 definition has been proposed to address this shortfall.

This project will develop Supplement 5 to ARINC Specification 810: Definition of Standard Interfaces for Galley Insert (GAIN) Equipment, Physical Interfaces to provide a definition of Size 6 (Microwave Oven) equipment.

3.1 Description

The definition of the new GAIN size 6 will be based on a double size 4 cavity. The standard definition will include dimensional drawings for size 6 GAIN

equipment and compartments, as well as interface definition, e.g., connector and guide bushing location.

3.2 Planned usage of the envisioned specification

New aircraft developments planned to use this specification yes☒ no ❑

Airbus: A320NEO, A330NEO

Boeing: 777X, 737MAX

Modification/retrofit yes☒ no ❑

Airbus: A320, A330, A340, A350, A380

Boeing: 737NG, 747-400, 747-8, 757, 767, 777, 787

Needed for airframe manufacturer or airline project yes ☒ no ❑

The timetable for this project is mainly driven by the development time needed to provide a mature definition. Introduction is not linked to a specific aircraft project.

Mandate/regulatory requirement yes ❑ no ☒

Program and date:

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

When is the ARINC standard required? April 2016

What is driving this date?

The timetable for this program varies and is mainly driven by the need to provide common definitions for the airplane and retrofit programs.

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

- Define GAIN equipment dimensions
- Define compartment dimensions
- Define location of standard GAIN interface

4.0 Benefits

The benefit is the reduction in the cost of design and installation of aircraft galleys.

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: Jamco, B/E Aerospace, Zodiac

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 the features that are beneficial to the airlines, air framers and suppliers, e.g., interfaces, and design and installation considerations.

4.3 Benefits for Airlines

- Gives the airlines greater flexibility when choosing the electrical galley insert they wish to install because the standards support multiple GAIN systems with a common base.
- Lowers GAIN system and installation costs by encouraging competition among suppliers and integrators.
- Lowers GAIN system integration and installation costs by providing common interface standards
- Lowers retrofit and upgrade costs because, with standard interfaces, different GAIN Systems can be fitted when needed.

4.4 Benefits for Airframe Manufacturers

- Reduces production cycle time by having fewer differences between the galley inserts.
- Reduces integration costs by standardizing dimensions and interfaces.

4.5 Benefits for GAIN Equipment Suppliers

- Provides more opportunities to compete in both the new airplane and retrofit markets.
- Facilitates qualification of systems and installations.

5.0 Documents to be Produced and Date of Expected Result

Supplement 5 to ARINC Specification 810.

6.0 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
Supp 5 to ARINC 810	2	6	5/2015	4/2016

6.1 Expiration Date for this APIM

April 2016

7.0 Comments

None