AS9102 First Article Inspection Report (FAIR) Guidelines
Requirements

- AS9102 – Aerospace First Article Inspection Requirement (Invoked by AS9100)

- 7.5.1.1 – Production Process Verification

The organization shall use a representative item from the first production run of a new part or assembly to verify that the production processes, production documentation and tooling are capable of producing parts and assemblies that meet requirements. This process shall be repeated when changes occur that invalidate the original results (eg., engineering changes, manufacturing process changes, tooling changes, etc.). Reference Q8 on AMI’s Quality Provisions.
FAI Definition & Purpose (Ref AS9102)

• A complete, independent, and documented physical and functional inspection process to verify that prescribed production methods have produced an acceptable item as specified by engineering drawings, planning, purchase order, engineering specifications and/or other applicable design documents.

• To provide objective evidence that all engineering design and specification requirements are:
  – Understood
  – Accounted for
  – Verified
  – Documented
FAIR Package

- AS9102 Forms (1, 2, 3)
- Bubbled Drawing
- Bill of Material (BOM)
- Certificate of Compliance
- RoHS Certificate of Compliance (if applicable)
- Material Certifications
- Special Process Certifications
- Test Data
- COTS PO and Traceability information

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The following forms comprise a First Article Inspection Report (FAIR)

- **AS9102 Form 1: Part Number Accountability**
  - Shall be used to identify the part that is being first article inspected and associated sub-assemblies or detail parts

- **AS9102 Form 2: Product Accountability – Raw Material, Specification and Special Process(s), Test Verification**
  - Shall be used if any material, special processes or functional testing are defined as a design requirement.

- **AS9102 Form 3: Characteristic Accountability, Verification and Compatibility Evaluation**
  - Shall be used to record an actual measurement or inspection/verification of the FAI part for every design characteristic on the drawing including Notes.
  - Include requirement and tolerance information in column 8
  - Record actual dimensions in column 9
  - Record tool used (asset number) to take the measurement in column 10
  - Do not use “Pass” or “Compliant” for dimensional data
  - No need to include reference dimensions

- **Fields on the forms are**
  - **Required**: Mandatory information
  - **Conditionally Required**: This field shall be completed when applicable to the product (e.g., serial number shall be entered when there is a serial number) or when required by the customer. **AMI always requires the fields be filled.**
  - Optional: This field is provided for convenience; the field may be left blank (N/A)
Bubbled Drawing

- A required element of a FAIR package to support Column 5 of Form 3
- Bubble and number all dimensions
- Bubble and number all surface finish callouts
- Bubble and number all material and hardness requirements
  - Don’t forget the requirements identified in the title boxes at the bottom of the drawings
- Reference dimensions do not need to be bubbled
- If part is shipped incomplete per Purchase Order (PO) or Statement of Work (SOW), account for the excluded characteristics by indicating in Form 3 **N/A per PO** or **N/A per SOW**
<table>
<thead>
<tr>
<th>Part Number:</th>
<th>AMI Part No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Name:</td>
<td>AMI Part Name, as seen on DWG</td>
</tr>
<tr>
<td>Serial Number:</td>
<td>Enter SN or Lot # or Date Code / Lot Code</td>
</tr>
<tr>
<td>FAIR Number:</td>
<td>FAI Report ID if available</td>
</tr>
<tr>
<td>Part Revision Level:</td>
<td>Latest revision that affects the part</td>
</tr>
<tr>
<td>Drawing Number:</td>
<td>AMI Drawing No</td>
</tr>
<tr>
<td>Drawing Revision Level:</td>
<td>AMI Drawing Revision</td>
</tr>
<tr>
<td>Additional Changes:</td>
<td>Provide reference numbers of any changes (Design Change, Engineering Change, Deviation, etc.)</td>
</tr>
<tr>
<td>Organization Name:</td>
<td>Supplier Name</td>
</tr>
<tr>
<td>Supplier Code:</td>
<td>Supplier Code given by AMI</td>
</tr>
<tr>
<td>PO Number:</td>
<td>AMI PO No</td>
</tr>
</tbody>
</table>

13. Detail Part: ____
   Assembly FAI: ____

14. Full FAI: ____
   Partial FAI: ____
   Baseline Part Number (including revision level): ____
   Reason for Partial FAI: 

  a) If above part number is a detail part only, go to field 10.
  b) If above part number is an assembly, go to the "INDEX" section below.

**INDEX** of part numbers or sub-assembly numbers required to make the assembly noted above.

15. Part Number: 
16. Part Name: 
17. Part Serial Number: 
18. FAIR Number: 

*This section is required only if the part number identified in field 1 is an assembly requiring lower level parts (i.e., detail parts) to be installed.*

| Part Number included in the assembly and items from the BOM included in the drawing, DPD, or next level assembly. Typically these are the part numbers, standard catalogue items, or sub-assembly numbers required to complete the product noted in field 1. |

| Name of the part installed in the assembly |
| Serial number of the part that is installed in the assembly |
| Report number for the detail parts and associated assemblies |

Check Complete, if all characteristics are conforming. Check Not Complete, if nonconforming characteristics are documented in accordance with 9102.4.4 FAI Complete FAI Not Complete

Signature: 
Date: 7/1/2015

Reviewed By: 
Date: 

Customer Approval: 
Date: 
This form is used if any materials, special processes, or functional testing is defined as a design characteristic.

<table>
<thead>
<tr>
<th>1. Part Number:</th>
<th>2. Part Name:</th>
<th>3. Serial Number:</th>
<th>4. FAIR Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Customer Approval Verification:</td>
<td>10. Certificate of Conformance Number:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name of applicable materials or special processes:
- *Material specifications and material form (e.g., sheet, bar, etc.):
- *Special process specifications:
- *if standard catalogue items or COTS are modified, list the standard hardware or COTS item

11. Functional Test Procedure Number:
12. Acceptance Report Number:

Functional Test Procedure number identified as a design characteristic.
The functional test certification indicating that test requirements have been met.

13. Comments

14. Signature
15. Date
<table>
<thead>
<tr>
<th>1. Part Number</th>
<th>2. Part Name</th>
<th>3. Serial Number</th>
<th>4. FAIR Number</th>
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**Characteristic Accountability**

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</thead>
<tbody>
<tr>
<td></td>
<td>Location of the design</td>
<td>If applicable, record requirement</td>
<td>Specified</td>
<td>List</td>
<td>Record the measurement tool</td>
<td>If the characteristic is found to be nonconforming, record a nonconformance document reference number.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>characteristic</td>
<td>characteristic</td>
<td>characteristic</td>
<td>(s) obtained</td>
<td>for the design</td>
<td>number</td>
<td></td>
</tr>
<tr>
<td></td>
<td>zone (page number and section), drawing</td>
<td>critical items</td>
<td>type [e.g., critical items, (e.g., drawing)]</td>
<td>(e.g., drawing)</td>
<td>for the design</td>
<td>characteristics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>number in the specification (callout), flight safety, nominal dimension, defined by customer</td>
<td>tolerances, drawing notes, specification requirements</td>
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**Inspection / Test Results**

<table>
<thead>
<tr>
<th>12. Signature</th>
<th>13. Date</th>
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<tbody>
<tr>
<td>7/1/2015</td>
<td></td>
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</table>
Common Mistakes

• Missing Signatures
• Not checking FAI Complete or FAI Not Complete (Form 1)
• Reporting Pass or Complies for measureable dimensions
• Missing Tool used to take measurement (Form 3, Field 10)
• Missing Material Certifications
• Missing Bubbled Drawing
• Leaving blank fields. Please N/A fields that do not need to be filled

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FAIR Review & Acceptance

• FAIR package will be reviewed by AMI Quality
  – If acceptable, Form 1 will be signed and sent to supplier
  – If unacceptable, it will be processed via Non-Conforming Material procedure

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Questions

• Contact Analog Module’s Quality Department with any questions or concerns

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