User Manual for the IMA System Integration and Verification Bench Reflect Memory Converter

Prepared by:

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Revision History

| **Change Order** | **Rev.** | **Rev. Date** | **Change Description** | **Release Date** | **Released By** |
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# Introduction

## Purpose

This document has been prepared by GE AVIC Civil Avionics Systems Company Limited, hereinafter called AVIAGE SYSTEMS. This document describes the procedures to build the software correctly.

## Scope

This document could only be used to build the SOFTWARE, IMA System Integration and Verification Bench Reflect Memory Converter, with AVIAGE SYSTEMS part number XXXXXXX, Rev 1.

## Definition of Terms

|  |  |
| --- | --- |
| I-SIVB | System Integration and Verification Bench for  IMA system |
| I-SIVB RMC | I-SIVB Reflect Memory Converter |
| VAIS | Virtual Aircraft Integration Software |

## Used Tools

The following tools or software are used or to be used together with I-SIVB RMC software.

|  |  |
| --- | --- |
| VAI Control Panel | VAI Tool provide by GE. |
| General Model Bridge | Software developed by AVIAGE SYSTEMS, to convert VAIS parameters in different protocal (ARINC664 to ARINC429, for example). |

# Referenced Documents

The following documents of the exact issue shown form a part of this document to the extent specified herein. For those documents showing no date of issue, the latest issue applies.

AVIAGE SYSTEMS

|  |  |
| --- | --- |
| ED3688  XXyyyy | Software Development Plan for Test Systems Software.  Design document for I-SIVB Reflect Memory Converter. |

COMAC

|  |  |
| --- | --- |
| E-C289JB054 | C919 Aircraft Avionics Laboratory Reflective Memory Network User Standard. |

# User Manuals

## Environment and Tools

### Supporting Files

Table 2. Supporting Files and Libraries Baselines

|  |  |
| --- | --- |
| **Baseline ID** | **Software Name** |
| SIM:1000065-001\_VENDOR | SOFTWARE, VENDOR, VIRTUAL AIRCRAFT INTEGRATION SYSTEM |
| SIM:1000065-00X\_VENDOR | SOFTWARE, VENDOR, GE Intelligent Platforms, PCI RFM2g Card Driver. |

### Environment

Computer installation: Desktop PC

Operating system: Windows 7 Pro 64-Bit (1000060-001)

Compiler(s): VS2010 + Service Pack 1 (1000061-001)

Assemblers: VS2010 + Service Pack 1 (1000061-001)

### Additional Tool: Model Bridge

YOU SHOULD USE MODEL BRIDGE TO MATCH THE NPD MESSAGES WITH REAL ICD.

## Get I-SIVB RMC Software Files

1. In Dimensions, perform a Get action for the folder **… \Sim\Product\I-SIVB-ReflectMemoryConverter\I-SIVB-ReflectMemoryConverter\bin\Release**

Except for I-SIVB-ReflectMemoryConverter.exe, other dynamic link libraries are also in need.

1. In Dimensions, perform a Get action for the folder **… \Sim\Product\I-SIVB-ReflectMemoryConverter\Configuration**

Following is the list of files:

| VAIS\_Config.vaisproj

| VAIS\_Config.system

| VAIS\_Config.resource

| VAIS\_Config.participant

| VAIS\_Config.icduser

| VAIS\_Config.icdimport

| I\_SIVB\_Config.xml

## Operation

Step1: Open VAIS\_Config.vaisproj, using VAI Configuration Editor, see the figure1.

In the Utility Participants configuration page, the following parameters may be in need of modification.

1. The Startup File Path can be modified to the real location if not.
2. The Startup Parameters should be the I\_SIVB\_Config.xml path.
3. The Utility Name/Description shall be the same as the content in the I\_SIVB\_Config.xml:

<I-SIVBParticipant name = "I-SIVB RMC" description = "AVIAGE" partNumber = "1" version = "1"/>

</I-SIVBconfig>

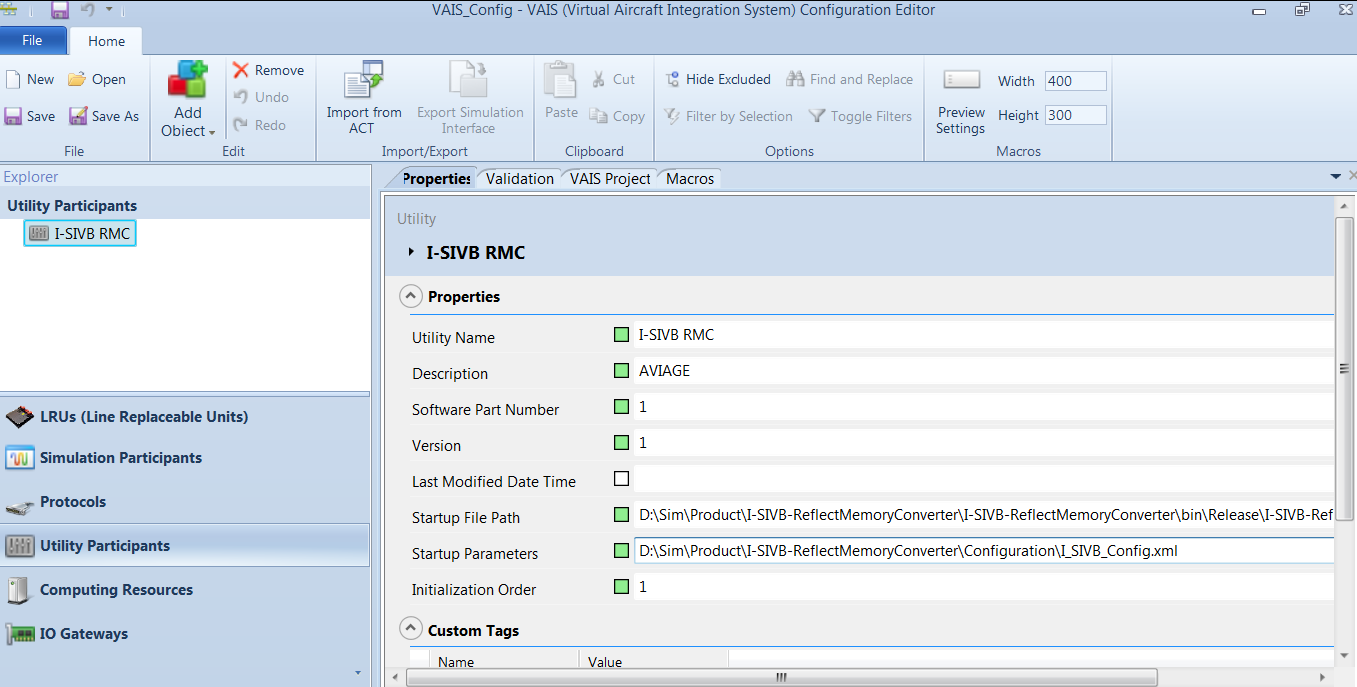


Figure 1. VAIS\_Config.vaisproj

Step2: Open I\_SIVB\_Config.xml.

The following parameters may need change:

1. VaisConfigPath

For example:

<VaisConfigPath value="D:\\Sim\\Product\\I-SIVB-ReflectMemoryConverter\\Configuration\\VAIS\_Config.icduser"/>

1. Reflect memory configurations:

Here is an example:

<RfmDevice id= "0" byteSwap="true" />

<SourceSelection firstSelection="IronBird">

<IronBirdData1>

<Data offset="B09000" end="B09FFF"/>

</IronBirdData1>

<FCSMiniRigData1>

<Data offset="B07000" end="B07FFF"/>

</FCSMiniRigData1>

</SourceSelection>

<Data4Message>

<Data4 offset="B0C000" end="B0CFFF"/>

</Data4Message>

1. Refresh rate:

Here is an example:

<RefreshRate value="50"/>

Step3: Open CommonSimRuntime.exe

Step4: Load the VAIS\_Config.vaisproj, using VAI ControlPanel.exe. And Run All to start the software, it is shown in Figure 2

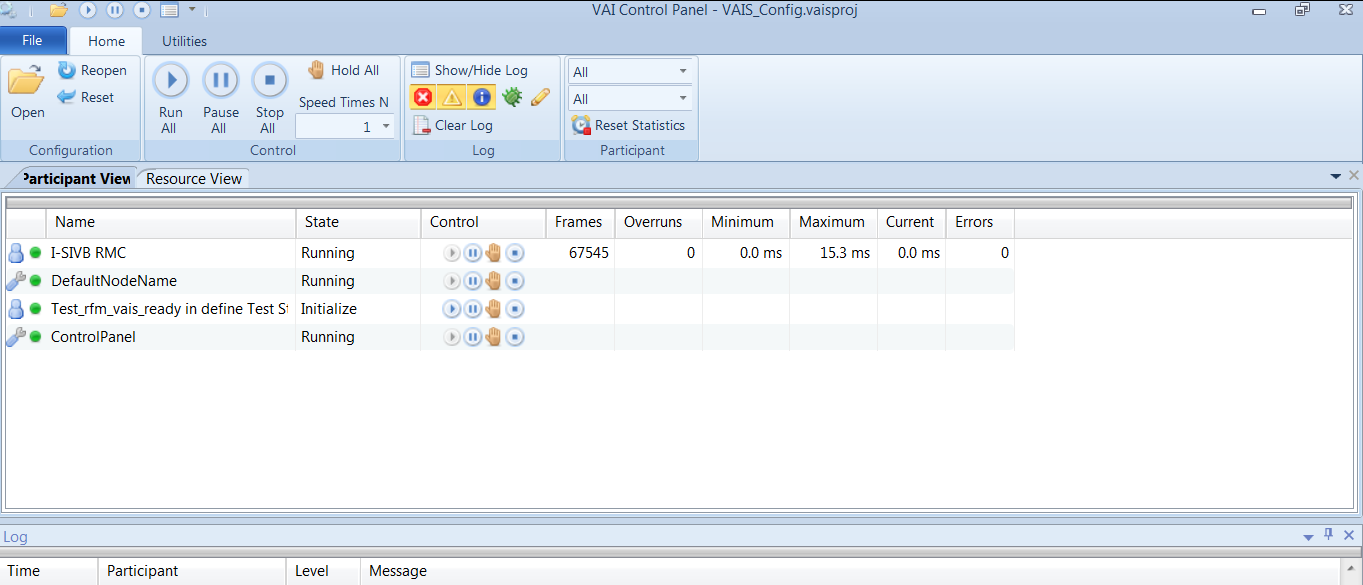


Figure 2. VAI Control Panel