Checklist of jig validation for ensuring working and troubleshooting guide

Check Point: Programmer Functionality Check Procedure:

1. Open the software Crypto V 307 and connect the Programmer to the computer keeping the Start Key Pressed. Expected Outcome: Programmer should get detected in the software.
2. Load the Binary File SR00000 in the Programmer using the software Crypto V 307. Set the BIN File ID as SR00000.
   Expected Outcome: Software should indicate that Binary File Uploading is successful.
3. Using Crypto V 307, set the Product count as 9999999. Click on Get Product Count. Expected Outcome: Software should display Infinite Product count.
4. Click the Self Test OP option in Crypto V 307. Expected Outcome: Software should display UART Successful for all the Targets from 1 to 8.
5. Disconnect the Programmer and connect it back keeping the start Key pressed. Restart the software if Hanging is observed. Expected Outcome: Programmer should get detected and software should indicate RA020004 Loaded in the Programmer.

Check Point: Jig Power ON Check
Procedure: Connect the Power Cable of the Test Setup after making the Connections. Power ON the Setup. Expected Outcome: The FT Card should get Powered on.

Check Point: Programmer Power ON check Procedure: Connect the adapter of the programmer to Power Supply. Expected Outcome: Programmer should Power ON

Check Point: Panel Mounting check Procedure:

1. Load the Panel onto the Jig. Check whether Panel is getting inserted onto the pips without getting stuck. Expected Outcome: Panel Loading should be smooth and the Panel should get completely inserted without getting Stuck.
2. Check whether the Mounting Platform is stable and all the screws are tightened. Expected Outcome: The panel mounting platform should be immovable and all screws are tightened.
3. Check whether Panel orientation/alignment can be altered in the Mounted condition. Expected Outcome: Operator should not be able to alter the Panel Alignment/Orientation.

Check Point: PCA Warpage check Procedure: Click on the Key SW4 on the FT card and load the PCA. After loading, check for PCA Warpage. Ensure extra support is provided at the corners. Expected Outcome: PCA Warpage should not be there.

Check Point: Panel Loading Check Procedure: Load the Panel onto the Jig using the Software SV-FUT-SFF-00. Check whether loading is happening in Power ON Condition. Expected Outcome: PCA Power ON should happen only after Loading

Check Point: Pin Alignment check
Procedure: After loading, ensure that all the Pins are making contact and Alignment issues are not there. Expected Outcome: Alignment should be proper and all the Pins should make contact.

Check Point: Programming Check Procedure:

1. Connect the Programmer to the Test setup. Set the Binary File ID as SR00000 in the software settings. Program the Panel using the Software SV-FUT-SFF-00. Expected Outcome: Programming should be successful at all the locations as indicated by the software.
2. Check the Tx LEDs on the Programmer immediately after Programming. Expected Outcome: The LEDs should blink with green colour.
3. Connect the Programmer to the Test setup and program the Panel using the Software SV-FUT-SFF-00. Set the Binary File ID as SR00000 in the software settings. Expected Outcome: Programming should Fail at all the locations as indicated by the software.
4. Check the Tx LEDs on the Programmer immediately after Programming. Expected Outcome: The LEDs should blink with Red colour.

Check Point: Power ON Relay Check Procedure: Power ON the panel using the software SV-FUT-SFF-00. Expected Outcome: All the PCAs should get powered ON.

Check Point: PCA Communication check Procedure: Run SV-FUT-SFF-00 and check whether all PCAs are passing in the communication test. Expected Outcome: All the PCAs should pass communication test.

Check Point: PCA RTC Synchronisation and Intialisation tests Procedure: Run SV-FUT-SFF-00 and check whether all PCAs are passing in RTC synchronisation and Initialisation tests. Expected Outcome: All the PCAs should pass RTC Synchronisation and Initialisation tests

Check Point: LED Blinking Detection Test Procedure:

1. Check all the LED Sensors are covered using sleeves. Run SV-FUT-SFF-00 and check all Meters are passing in LED Blinking Detection test. Expected Outcome: All the PCAs should pass LED Blinking Detection test.
2. Remove the communication cable for Target 1 and run SV-FUT-SFF-00. Ensure that PCA 1 LED is not blinking during LED blinking detection test. Expected Outcome: PCA 1 should fail in LED Blinking detection test.
3. Repeat the procedure for all the remaining PCAs from 2 to 6. Expected Outcome: The respective PCA should fail during LED Blinking detection test.

Check Point: Pin Voltage Verification Test
Procedure:

1. Run SV-FUT-SFF-00 and check TP2 Voltage in all 6 locations. Expected Outcome: TP2 voltage should be between 5.88 - 5.32 at all 6 locations.
2. Run SV-FUT-SFF-00 and check TP5 Voltage in all 6 locations. Expected Outcome: TP5 voltage should be between 3.5 - 2.9 at all 6 locations.

3. Run SV-FUT-SFF-00 and check TP3 Voltage in all 6 locations. Expected Outcome: TP3 voltage should be between 3.78 - 3.42 at all 6 locations.
4. Run SV-FUT-SFF-00 and check TP6 Voltage in all 6 locations. Expected Outcome: TP6 voltage should be between 3.5 - 2.9 at all 6 locations.

Check Point: Sleep Mode current Verification test Procedure: Run SV-FUT-SFF-00 and check sleep mode current in all 6 locations. Expected Outcome: The sleep Mode currents should be between 4 - 1.5 microamperes.

Check Point: Cover Open and Magnetic Tests Procedure: Ensure bushes are provided to keep the cover open switch pressed at all 6 locations. Ensure Magnets are placed on top of the holders at all 6 locations. Run SV-FUT-SFF-00 and check the status of Anomaly and CT Tamper status at all Locations. Expected Outcome: Anomaly data should display 0000 0010 - 000 0000 and CT tamper status data should indicate 0000 00-1 00-0 0001 in all 6 locations.

Check Point: Jig Power OFF Check Procedure: Run SV-FUT-SFF-00 and check whether all PCAs are Powered OFF before Panel is brought down. Expected Outcome: All PCAs should get automatically Powered OFF before unloading

Check Point: Panel Dismounting check Procedure: Remove the Panel from the Loading Platform Expected Outcome: Panel should get removed from the Loading Platform without getting stuck/bent

Check Point: Reliability Check Procedure: Load the Golden Sample on the Jig. Use the Reliability check software SV-AR-PCA-RT and monitor the performance of Test Setup for 100 Operations. Verify the Report after the Test. Expected Outcome: Test Result should come as Pass for all the 100 Operations