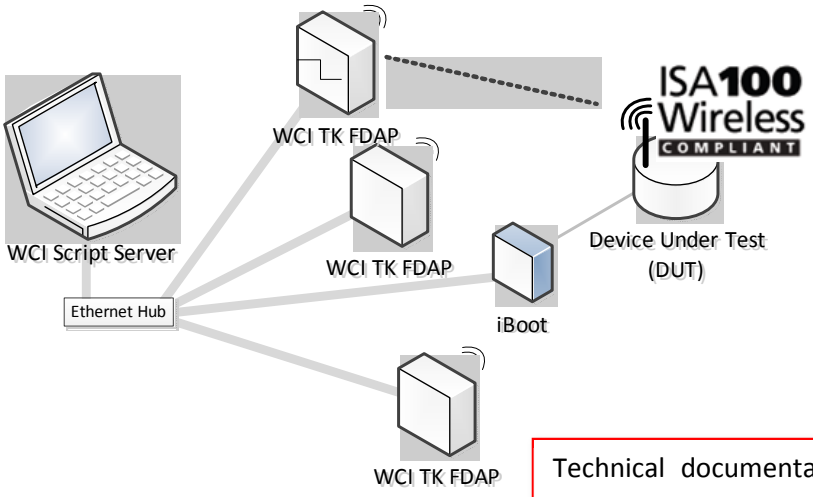
ISA100Wireless Compliance Institute

ISA100.11a Stack Interoperability Test Kit (STK)

Description

The ISA100 Wireless Stack Conformance Test Kit (STK) is a complete package that allows the user to ensure a manufacturer's stack conforms to WCI's official ISA100 Wireless registration testing. This product defines test requirements and verifies correct communication behavior of a wireless device as defined in the ISA100.11a standard. It is an excellent tool for troubleshooting, debugging, and regression testing of ISA100 Wireless stacks and products.

The STK allows certifying device conformance to the ISA100.11a standard, providing the basis for use of the ISA100 Wireless Compliant logo and registration on this website.



Components

- Script Server (Linux machine)
- Test Scripts
- Three (3) Diagnostic Backbone router (WCI TK FDAP)
- Reference Device Under Test (DUT)
- iBoot
- Ethernet Hub
- Documentation
- Technical Support for STK setup and usage
- Part Warranty - one (1) year

Technical documentation is preloaded on the WCI Script Server, also available as a download on WCI' GitHub portal, as well as via Centero, LLC.

For technical support please contact us at:

support@centerotech.com

centero

About the ISA100 Wireless Compliance Institute

Comprised of industry leaders from major manufacturing and automation control system users and suppliers, the ISA100 Wireless Compliance Institute (WCI) was formed to decrease the time, costs, and risks of developing and deploying standards-based, industrial wireless devices and systems. WCI has established a collaborative industry-based program among users, suppliers, and other stakeholders that conducts independent testing and certification of wireless devices and systems; provides education, tools, and technical support to users and suppliers; accelerates adoption of the ISA100 standards; and assures interoperability. For more information about the ISA100 Wireless Compliance Institute, visit http://www.isa100wci.org.

STK setup check

In order to verify that your ISA100 STK setup works fine and is ready for usage, please perform the following steps:

1. Connect the Script Server, iBoot and the WCI TK FDAP devices via Ethernet cables to the provided network hub.
2. Power ON the Script Server, iBoot and the WCI TK FDAPs.
3. Log in, into the Script Server (user: wci / password: wci), and open new Terminal. The terminal should open in the folder that contains the WCI STK applications.

   ~/WTK_DownloadsSTK/STK_2.0/Stack_TestKit/DL/DLTP4_SlowJoin_400msec
4. Power ON the Device-Under-Test (USB Power supply connected to iBoot).

5. On the Script Server, open a Terminal window and try to ping the WCI TK FDAP devices to ensure that both WCI TK FDAP and Script Server can communicate via Ethernet

   WCI TK FDAP 1: ping 192.168.254.8
6. In the **~/WTK_DownloadsSTK/STK_2.0/Stack_TestKit/DL/DLTP4_SlowJoin_400msec** folder execute Join test(s) by typing in:

   ./Execute_TP_Stack.sh
7. The test script application will start sending commands to the WCI TK FDAP. There are 5 automated tests that will be run sequentially for a typical duration of 2-3 minutes. When the tests are completed the following message will be displayed "**5_ResetDUT_ProvisionedState …..TEST PASSED**".

FCC Compliance Statement

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS.

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: —Reorient or relocate the receiving antenna. —Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/ TV technician for help.

This equipment uses the following Antennas and may not be used with other antenna types or with antennas of higher gain:

Mfg.:Nearson S181AH-2450S

Type: 2.4 GHz, ½ WAVE RP-SMA, 90 Degree Swivel

Gain:2 dBi

This equipment complies with FCC RF Exposure requirements and should be installed and operated with a minimum distance of 20cm between the radiator and any part of the human body.

ISED Compliance Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio nterference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This equipment complies with the ICES RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of the human body.

Cet équipement est conforme aux limites d'exposition aux radiations ICES définies pour un environnement non contrôlé . Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et une partie de votre corps