HSE Interoperability Test Kit (ITK) 6.0 Frequently Asked Questions

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What is the HSE ITK?

One of the founding principles of the Fieldbus Foundation™ is the support of interoperability, the ability to operate multiple devices from multiple manufacturers, in the same system, without loss of functionality. The HSE Interoperability Test Kit (HSE ITK) tests the black box behavior of a FOUNDATION™ fieldbus HSE device using only its interface. It is assumed that the device under test uses a certified stack.

The scope of testing depends on the amount of interoperability and the level of FF conformity implemented by the manufacturer of a device. If the device under test uses Function Blocks as specified by the Specifications and is implemented according to profiles, the test system verifies whether these blocks are implemented correctly.

The test system, running on an IBM-compatible PC under Microsoft Windows® XP/Vista (32-bit)/7 (32-bit), verifies the correct behavior of the devices under test as defined in the FF Specification (/1/).

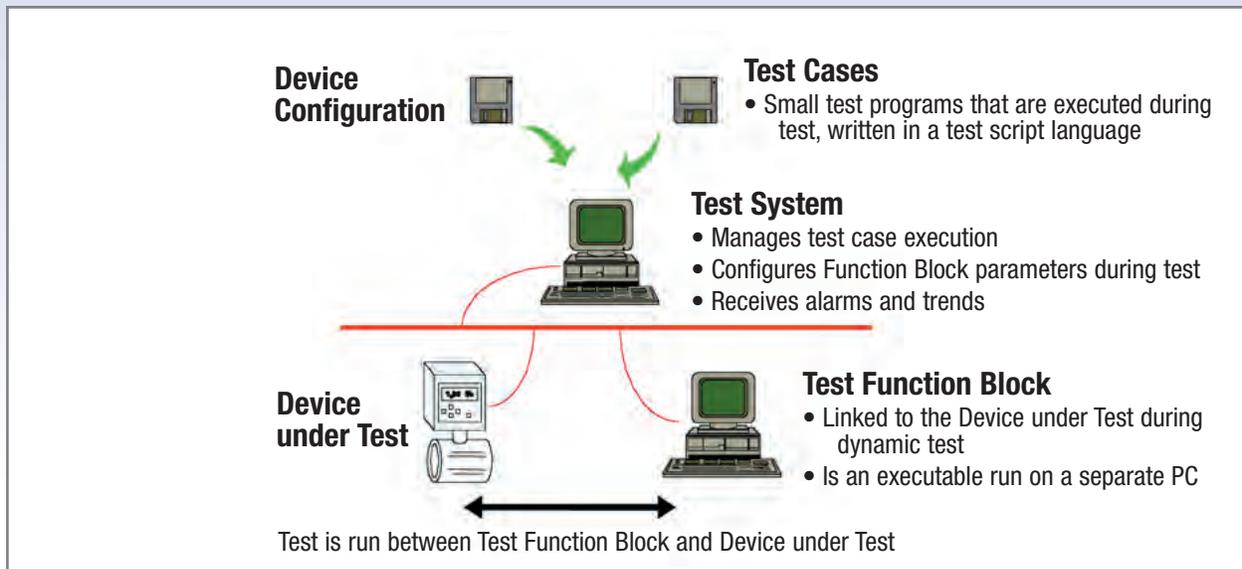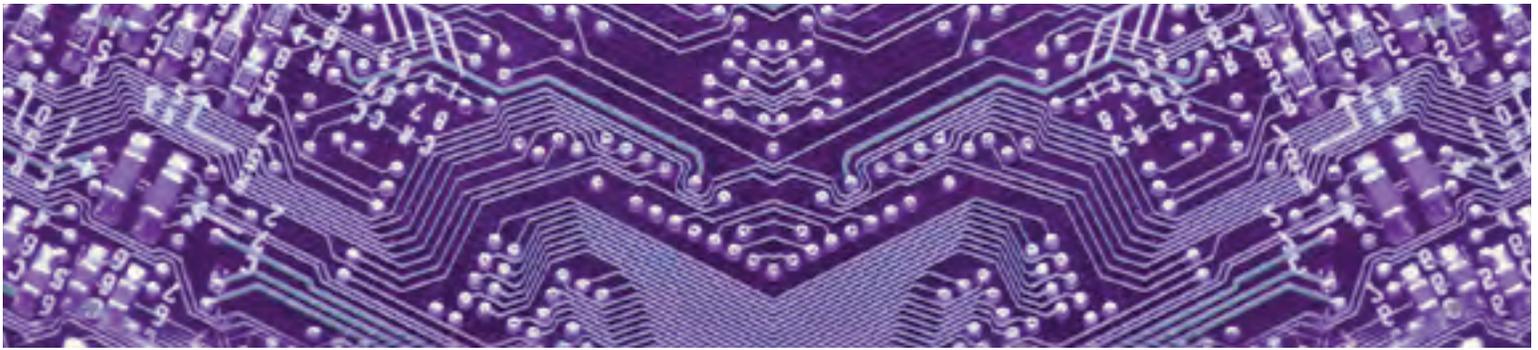Figure 1 shows a typical test configuration.

Device Configuration

Test Cases
• Small test programs that are executed during test, written in a test script language

Test System
• Manages test case execution
• Configures Function Block parameters during test
• Receives alarms and trends

Device under Test

Test Function Block
• Linked to the Device under Test during dynamic test
• Is an executable run on a separate PC

Test is run between Test Function Block and Device under Test

Figure 1: HSE Interoperability Test Configuration

What can I do with HSE ITK 6.0?

HSE ITK 6.0 is used for interoperability testing of HSE field devices. The kit will verify the functionality of a device and conformity to the Fieldbus Foundation Function Block Specifications. By using the included software, you can run tests identical to those used by the Fieldbus Foundation before sending it to them for official registration.

Using the HSE ITK, you can select to run the full set of tests or only a portion of the available tests.

What is included?

The CD includes:
    HSE ITK Test Library
    HSE ITK Executable
    HSE ITK Test Cases (source and binary)
    HSE ITK User's Guide
    HSE ITK Test Case Library Document
    HSE ITK Test Case Description
    DD Super Viewer Software
    NI-FBUS HSE Software and License
    HSE Test Function Block Executable (HSE TFB)

And separate to the CD is:
    Hardware Dongle for HSE TFB

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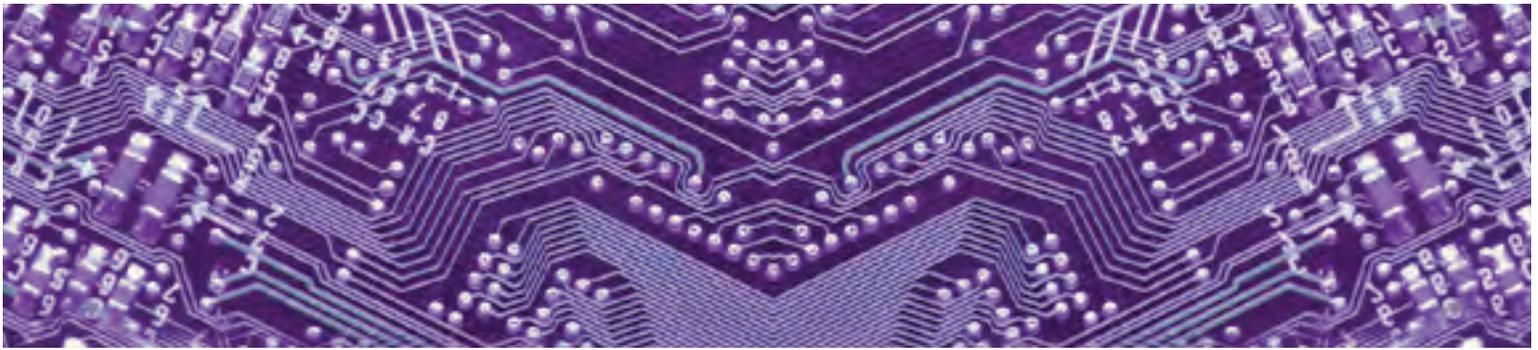
What are the system requirements?

Two PCs are required:
- One machine for Test System
  (Windows XP/Windows Vista (32-bit)/ Windows 7 (32-bit), Ethernet Network
   Interface card installed)
- One machine for Test Function Block
 (Windows® 2000/Windows XP, Ethernet Network Interface card installed)

Is the Autotester compatible?

Yes. However, HSE devices are powered separately. If the device uses less than
30 VDC, the Autotester can be used "as is"; otherwise, slave relays (not supplied)
can be used in conjunction with the Autotester.

Are there any additional products that would facilitate my debugging process?

Yes. The HSE Analyzer toolkit is a good add-on companion. It allows you to capture
the HSE packets and see the communications across the HSE connection.

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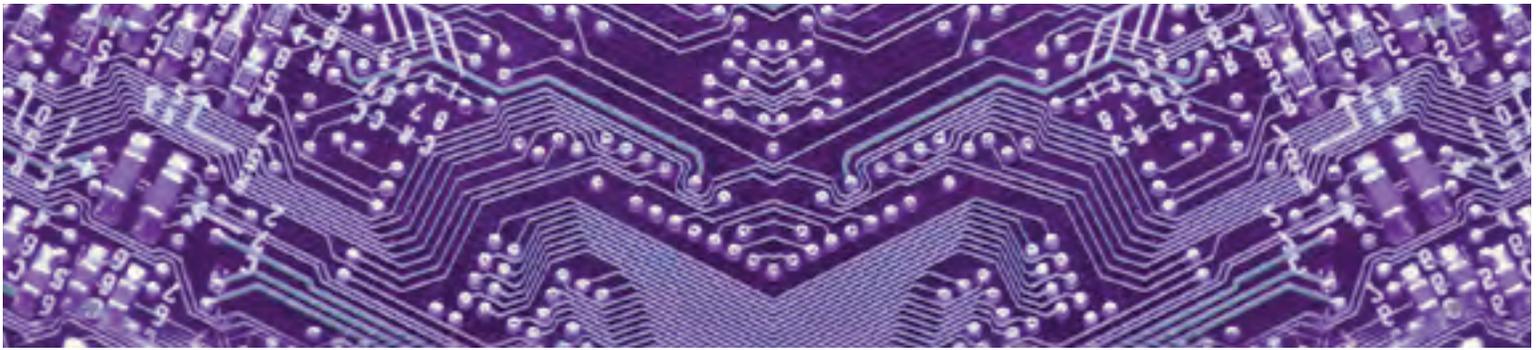
Can I self-register my HSE devices with this software?

No, registration for all devices must be done at the Fieldbus Foundation. The HSE ITK software will assure that your device meets the specifications designed for HSE devices on site before sending the device for testing to the Fieldbus Foundation. The kit will also reduce downtime and registration fees incurred during official registration.

## Why did the HSE ITK jump from Version 1.0 to the new HSE ITK 6.0 version?

To simplify version management, the HSE ITK major version corresponds to the profile numbers as specified in FF-946 Device ITK Profile Specification. In other words, the ITK major version will match the profile it fulfills.

Can I register a device with HSE ITK Version 6.0?

Yes. The Fieldbus Foundation registration policy established by the Technical Steering Committee requires two vendors to complete testing with the HSE ITK before device registration is granted. Once this milestone is met, the Fieldbus Foundation will issue registration certificates to those devices that have successfully completed testing.

After two devices have completed the registration process, the Fieldbus Foundation will issue an update to the HSE ITK to correspond with the latest 6.x H1 ITK. For example, if the current H1 ITK is 6.0, the Fieldbus Foundation will release the HSE ITK 6.0.

Those with active HSE ITK maintenance agreements will automatically receive updates to the HSE ITK.
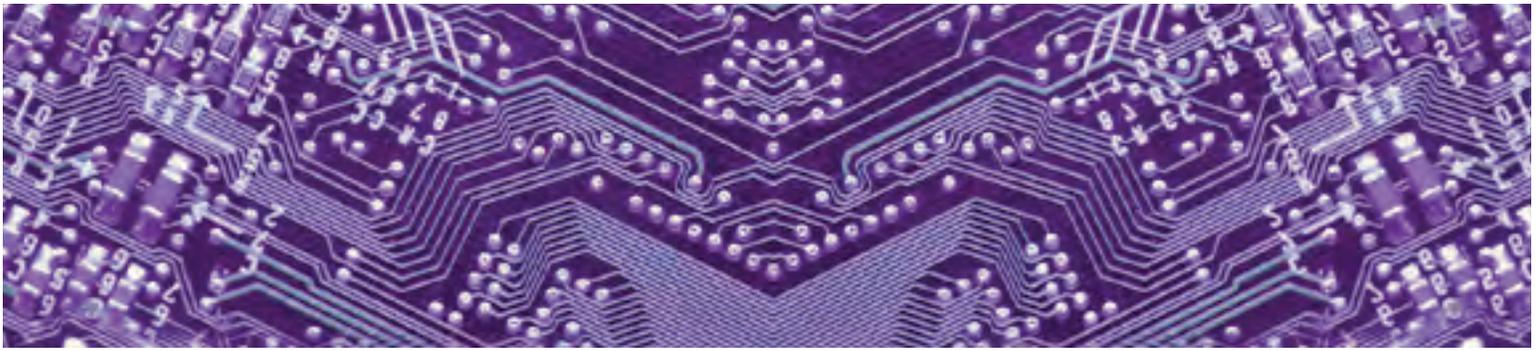
What is new in the HSE ITK 6.0?

The HSE ITK 6.0 has been updated to include the same advanced feature as offered by the H1 ITK. These include:
- Test cases against device profile ITK 6.0
- Support of the VC++ 2008 (v9) standard
- All-new, intuitive user interface
- Updated HSE test function device application

How do I get support?

You may e-mail support@fieldbus.org.

Or call the Fieldbus Foundation at (512) 790-8890.

Questions may be posted to the Fieldbus Forums at http://forums.fieldbus.org/.

If you do not have access to the Fieldbus Forums and wish to join, please be sure to follow the instructions. If you need assistance please contact us.