Citect SSTAB (PCI) Driver Setup Instruction

1. Overview

The new version of the Citect SSTAB board driver (V2.05.00.001B) now supports communication to Allen Bradley processors via Data Highway Plus, using the 5136-SD-PCI cards.

This card was developed with Plug and Play functionality, as defined in Revision 1.0A of the Plug and Play BIOS Specification. When a computer is powered-up, PCI BIOS will automatically assign interrupt request levels (IRQ) and base memory address values to the card. Citect SSTAB driver will automatically retrieve these configurations and use them to communicate with the 5136-SD-PCI cards.

There is no ROM on the card. The Citect SSTAB driver also supports to download appropriate interface software to the card at the run-time, making it possible to communicate. Therefore, it is unnecessary to use another software to set up the card.

Important: When starts your PC, a message "New device found" will pop up. You should **not** install the 5136-SD-PCI card in order to let Citect SSTAB driver to take the hardware resource of the card.
If the card had been installed, you need uninstall it.

The SSTAB driver has been tested on the Win2K and Windows XP.

2. 5136-SD-PCI card

For the details of the hardware, please refer to the 5136-SD-PCI hardware Guide (*Ref 1*). The following two things need take care when working with the card.
   a. Network cable
       When test the driver, a 6-pin solderless Phoenix combicon connector is used to connect the network.
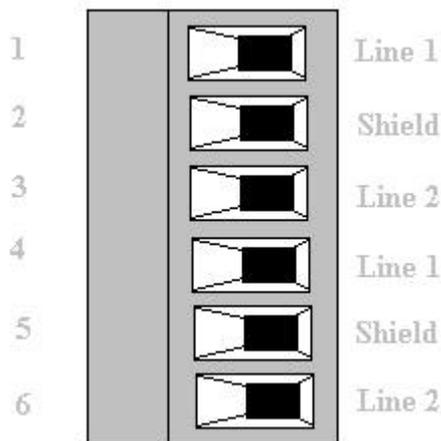
The pins are numbered from the top down; top is the pin farthest from the LEDs. The top pin is Pin 1. Pin1, 4 are cabled with clear, Pin2, 5 are SHIELD and Pin 3,6 are blue.
The three –pin connector has not been tested.

b. The LEDs
   There are two bi-color LEDs on the card: the Network LED, and the SYS LED.
   When start up the computer at the first time. The SYS LED is RED. When the Citect SSTAB successfully downloads a module to the card, it turns the SYS LED off (when the second time to start he PC). If the loader does not run successfully, it leaves the SYS LED red.

   The Network LED green turns green whenever the card is active(transmitting) on the network. If the Network LED flickers rapidly, it means that the card is active on the network. The Network LED should never go completely off if there is a node on the network.
   If the Network LED doesn't turn green, then you need check your hardware or network cable.

3. Citect Project Setting

Boards Form

Board Type
   SSTAB
Address**
   0xFFFF
   **Note: The driver uses this to determine the type of card, do not append or zeros.
I/O Port
   0x77: not used by the code.
Interrupt
   None
   **Note: The driver uses this to retrieve the IRQ configuration, do not change.
Special Opt
   -pN   to set the DH/DH+ address of the card to N (Note: N is a Decimal value. So if you need to specify an octal value then N should be in the format 0oXX where XX is the octal address).
   -Sn   to select the speed on the Data Highway Plus network, where n=the number representing the speed required.
          n = 1 for 115 kbaud
          n = 2 for 230 kbaud
          (default is 57 kbaud)

Ports Form

See Citect online help for Data Highway communications to Allen Bradley processors.

I/O Devices Form

See Citect online help for Data Highway communications to Allen Bradley processors.

4. Others

- As suggested by Citect Knowledgebase Article Q2094, the following Citect.ini setting is recommended:
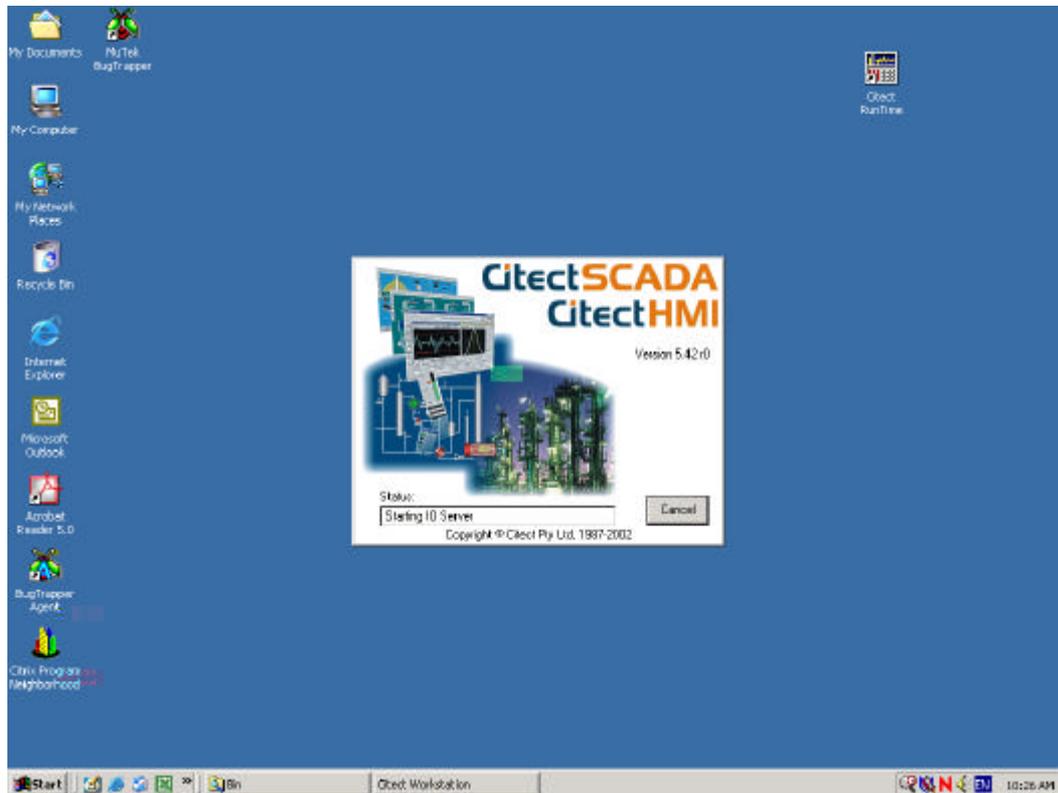
      [ABTCP]
      Polltime = 10

5. **Steps to set up a SSTAB project**:
   This section shows how to set up a SSTAB project step by step, based on Citect V5.42. If different Citect version, the pop up message maybe a slight different.

The first time to start your project,

The system is checking your setting. It will take 1-2 minutes on the page.

Then, you will get a message:
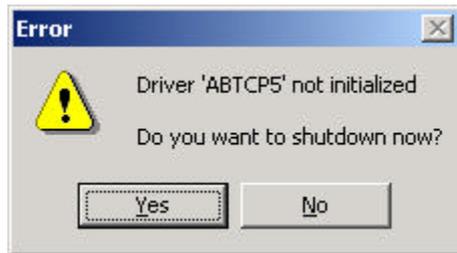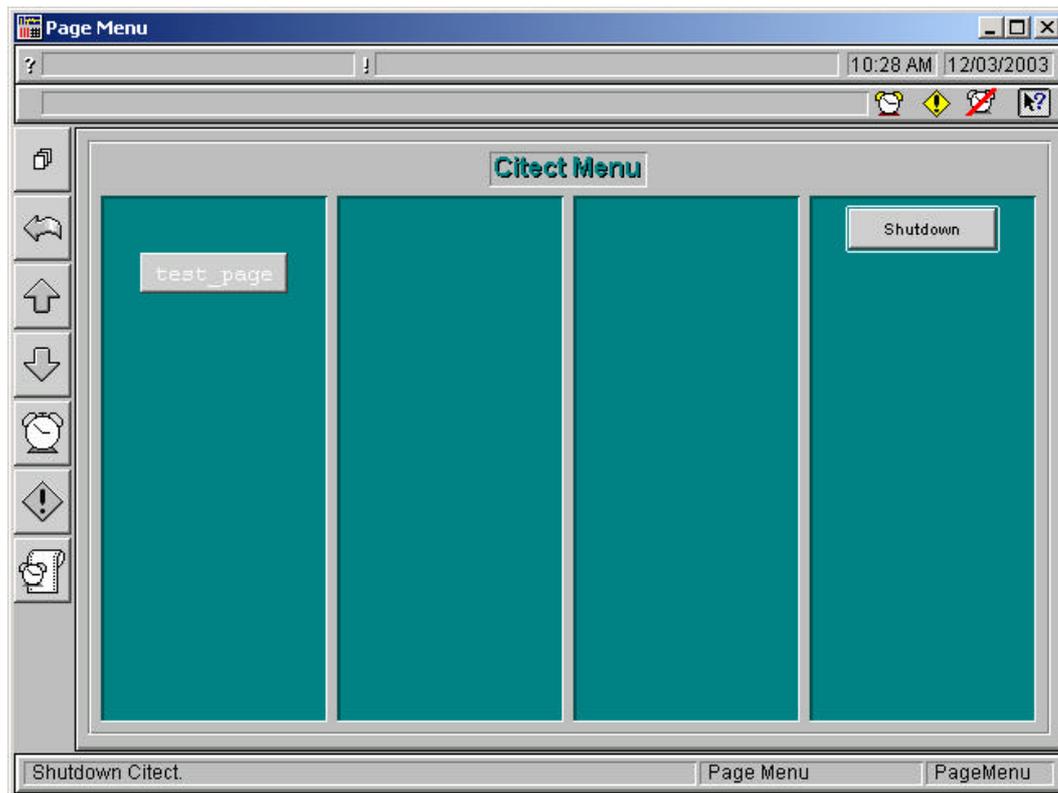

Press "OK", then

Press "OK", then

Error

Cannot find serial drivers

OK

Press "OK", then

Error

Driver 'ABTCP5' not initialized

Do you want to shutdown now?

Yes   No

Press "NO", then

Page Menu

Citect Menu

Shutdown

test_page

Shutdown Citect.   Page Menu   PageMenu

Press "Shutdown", and restart your PC.

The second time start the project:

Citect Driver Error

Hardware settings for device 0 have changed.
Please shutdown Citect and restart the computer after Citect have completed starting up.

OK

Press "OK", then

Error

Board 'BOARD1' is undefined

OK

Press "OK", then

Error

Cannot find serial drivers

OK

Press "OK", then

Error

Driver 'ABTCP5' not initialized

Do you want to shutdown now?

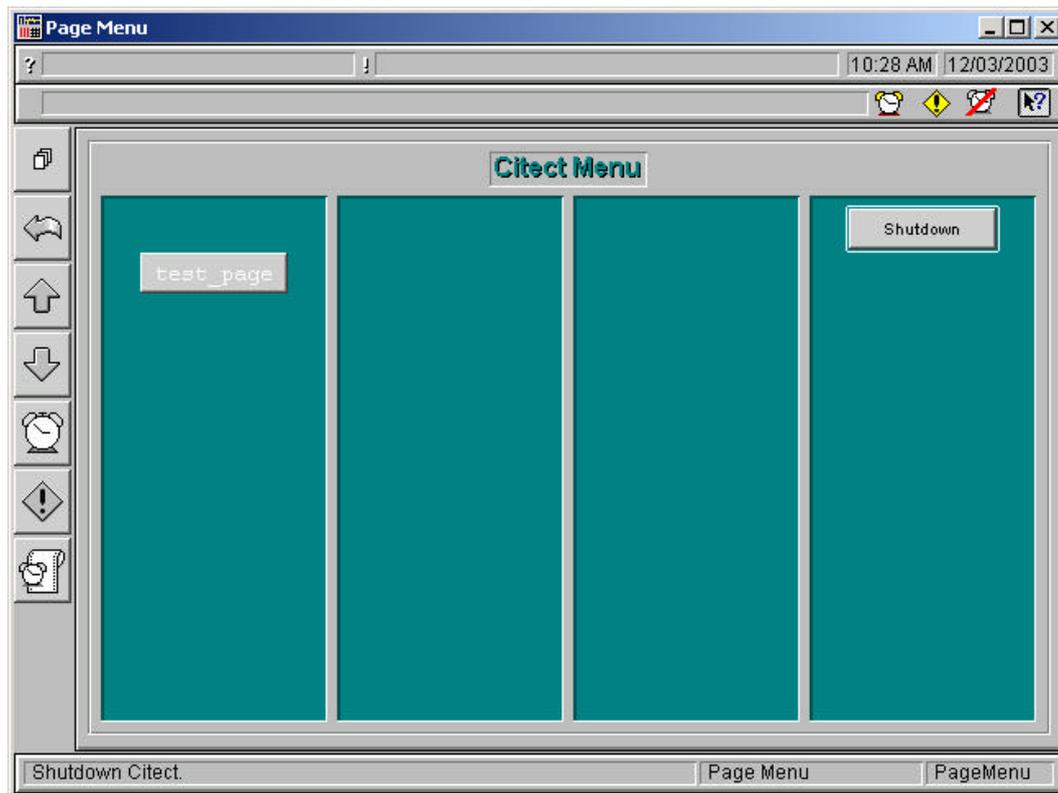Yes   No

Press "NO", then

Press "Shutdown" , restart your PC.

The third time you will start your project directly.

4. Limitation

The SSTAB driver only supports one 5136-SD-PCI card at the stage.

5. Reference:

1) 5136-SD-PCI Hardware Guide, version 1.01, S-S Technologies Inc.
2) Citect for Windows Board Driver Specification SSTAB Driver, Citect Pty. Ltd.