

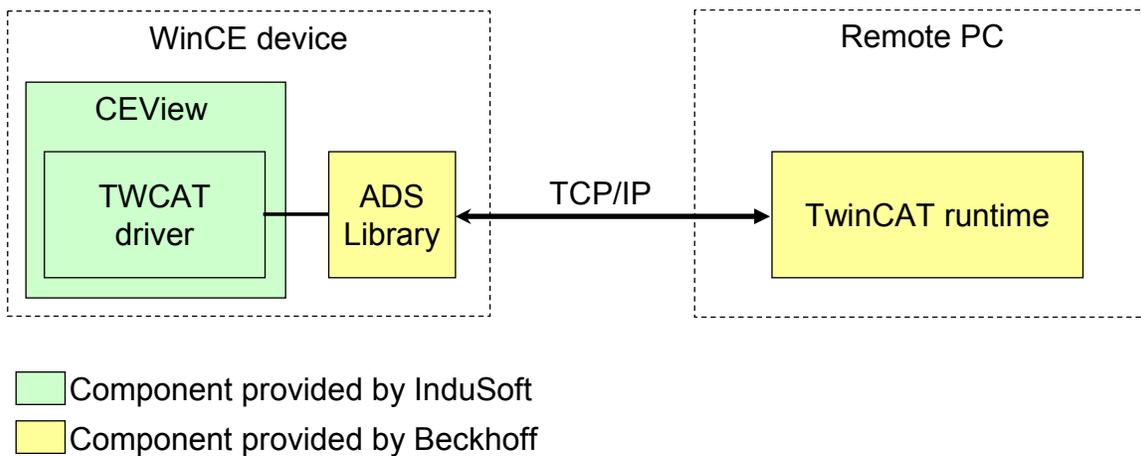
## TwinCAT Remote Communication From WinCE Devices

### I. Introduction

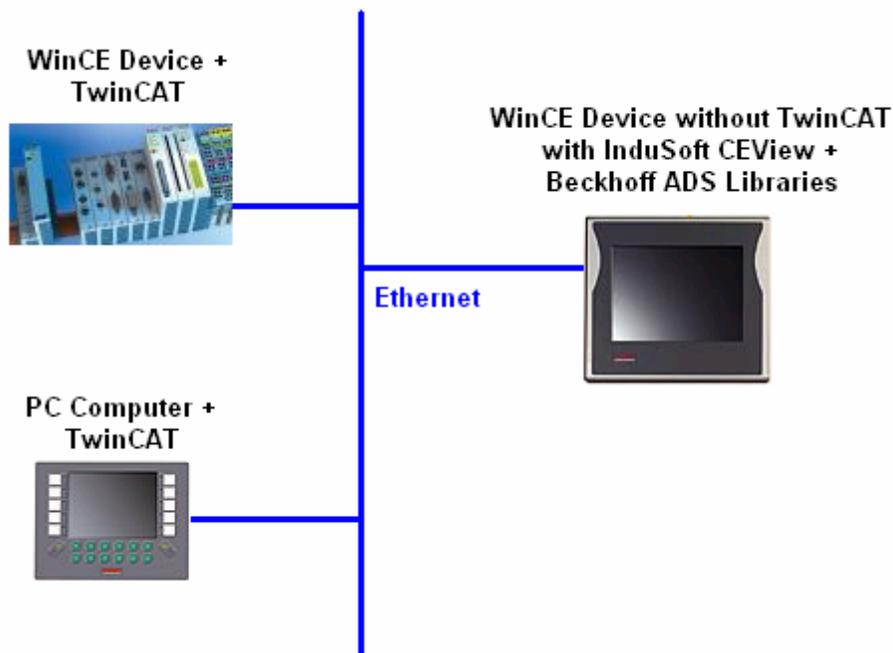
The aim of this document is to describe the procedure to establish communication between an InduSoft application running under a Windows CE device where TwinCAT runtime is NOT installed, and another device (WinCE device or personal computer [PC]) running the TwinCAT runtime, provided by the Beckhoff Automaton LLC.

### II. System Architecture

TwinCAT is PC-based control software developed by Beckhoff. It is supported by several Windows CE platforms (WinCE devices) and the Windows 2K/XP operating system (PC). InduSoft developed the TWCAT communication driver, which exchanges data with TwinCAT runtime via the Automation Device Specification (ADS) libraries provided by Beckhoff.



The TWCAT can be used to exchange data with TwinCAT runtime in the local station (where the TWCAT driver is executed) or in a remote station, via TCP/IP.



### III. Installing InduSoft CEView + TWCAT Driver

Please install the TWCAT driver on your PC, along with InduSoft Web Studio (IWS). When you install IWS, the TWCAT for all platforms supported by this product are installed in the developed PC. If the TWCAT is not available for the specific WinCE platform that you need (version + processor type), please contact your InduSoft vendor.

After installing the TWCAT in your development PC along with IWS, you can use the *Install System Files* command, from the *Execution Environment* dialog of IWS, to download the CEView files and the TWCAT to your WinCE target device, where the application will run.

### IV. Installing the Beckhoff ADS Libraries in the WinCE device

The TWCAT from InduSoft uses the ADS library (provided by Beckhoff) to exchange data with the TwinCAT runtime. Therefore, the ADS libraries must be installed in the WinCE device; otherwise, the TWCAT will be unable to exchange data with the TwinCAT runtime.

The ADS library is composed of the following files:

```
atlce300.dll
TcAdsDllCe.dll
TcAdsTest.exe
TcAmsRemoteMgr.exe
TcScriptCe.dll
```

These files are provided by Beckhoff and they must be stored in the `\BIN` sub-folder of the WinCE device (the directory where the `CEView.exe` program file is also stored).

You can either copy these files manually into your WinCE device, or install them with the *Install System Files* command from the *Execution Environment* dialog of IWS. In order to do so, copy the files listed above into the `\InduSoft Web Studio v6.0\Redist\Wince 4.0\<PPPPPP>\Bin`, where `<PPPPPP>` is the processor type.

If your WinCE device is a WinCE v3.0, please copy the files into the \InduSoft Web Studio v6.0\Redist\CEView\<>PPPPP>\Bin directory before executing the *Install System Files* command.

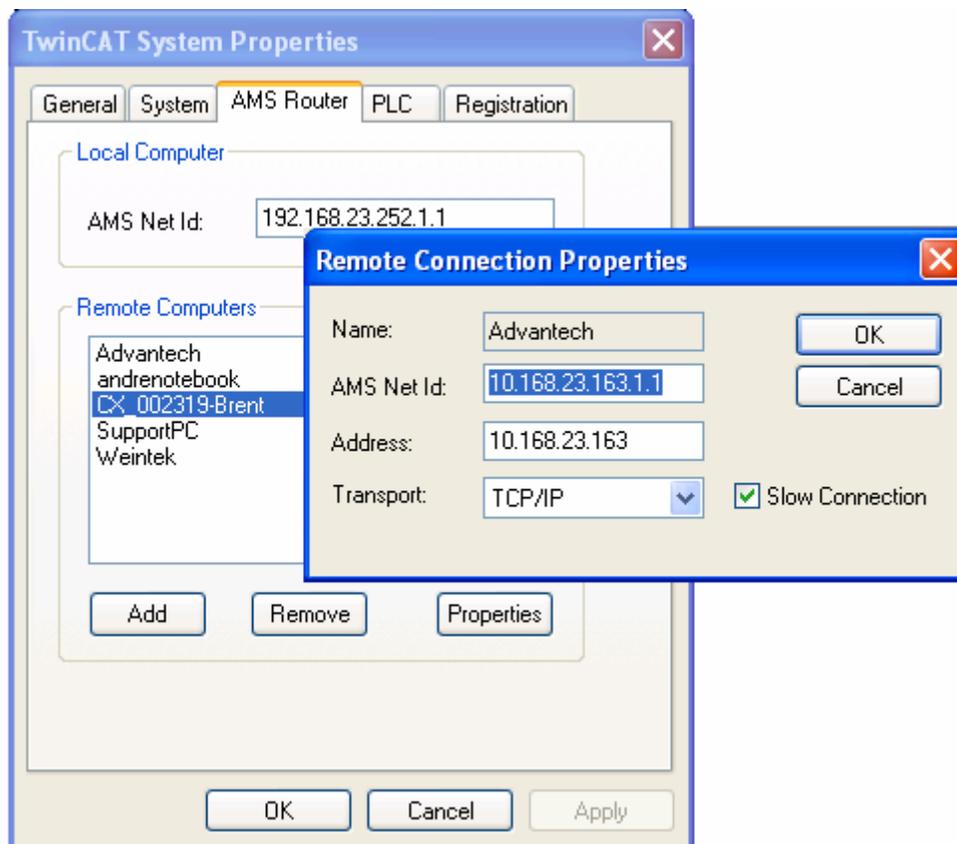
## V. Configuring the ADS Remote Connection

In order to establish communication between the ADS library and the Remote TwinCAT application, you first need to configure the AMS Router.

**Note:**  
The AMS Router parameters must be configured in both the WinCE device (where the TwinCAT runtime is not running) as well as in the remote PC where TwinCAT is running.

### Configuring the AMS Router Settings on the PC

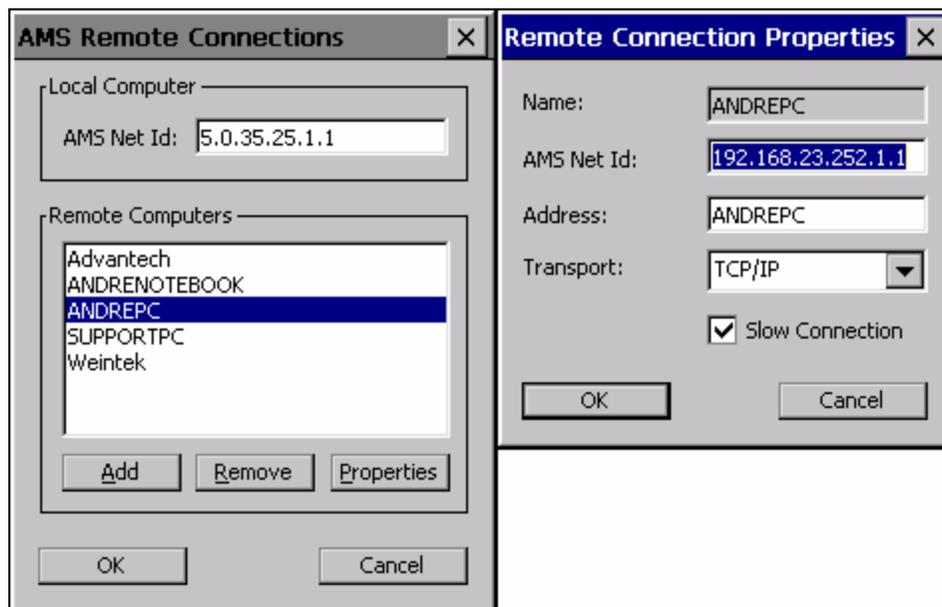
1. If you are running TwinCAT on a PC, right-click the TwinCAT icon from in the System tray, select **Properties**, and then click the *AMS Router* tab.
2. Use the *TwinCAT System Properties* dialog to configure **AMS Net ID** of the local and remote computers. The remote computer is the WinCE device running CEView with the TWCAT driver and the ADS libraries.



3. After you add additional **Remote Computers** and configure the settings, you **MUST** reboot your TwinCAT system for the modifications to take effect.

## Configuring the AMS Router Settings on the WinCE Device

1. Run the `TcAmsRemoteMgr.exe` program from the \BIN sub-folder of the WinCE device (directory where the `CEView.exe` program file is also stored) to launch the *AMS Remote Connections* dialog.
2. Use this dialog box to configure the **AMS Net ID** address of the local and remote computers. The remote computer is the PC running the TwinCAT runtime.

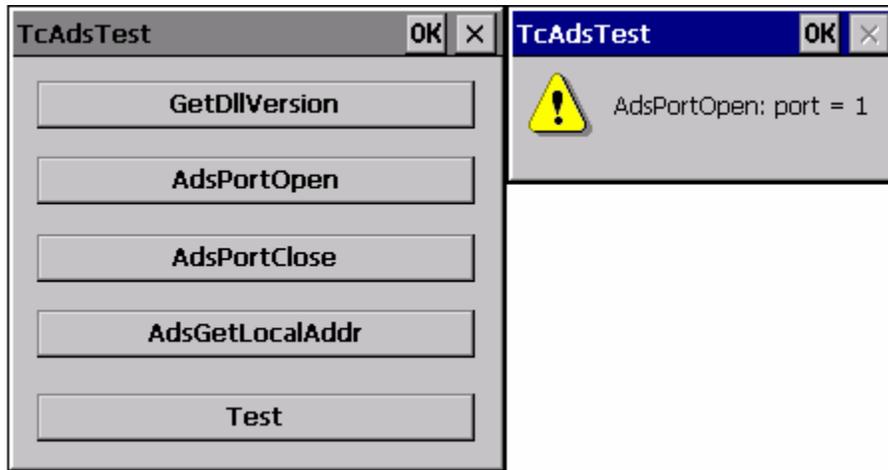


3. After adding additional **Remote Computers** and configuring the settings, you **MUST** save the registry and reboot the WinCE device.

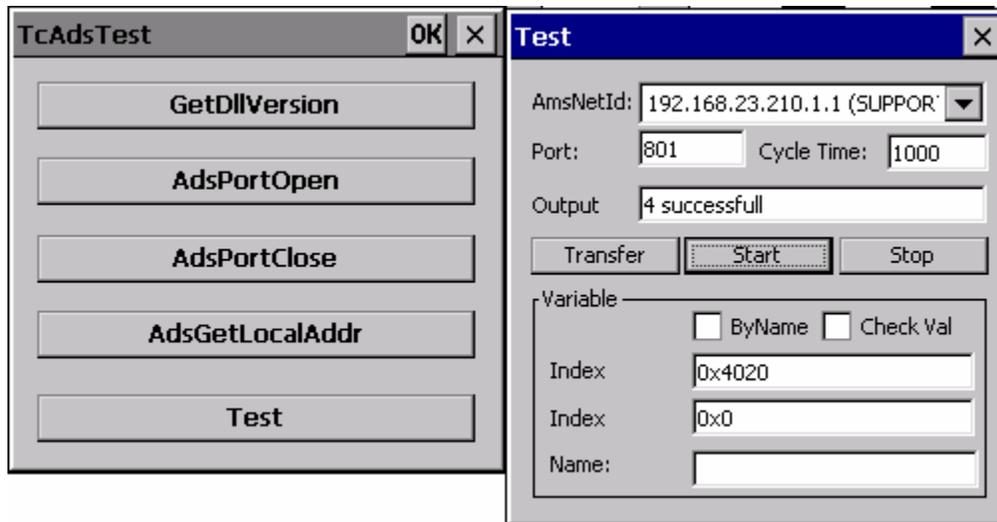
## VI. Testing the ADS Connection

After you have both systems running (WinCE device and remote PC running TwinCAT), you can test the connection between them.

1. Run the `TcAdsTest.exe` program from the `\BIN` sub-folder of the WinCE device (directory where the `CEView.exe` program file is also stored) to launch the `TcAdsTest` dialog.
2. When the `TcAdsTest` window opens, click `AdsPortOpen`.



3. Then, click the `Test` button



4. If the connection is successfully established, the `Output` field will display `<N> successfull`, where `<N>` is an integer number. In this case, the ADS Remote Connection is properly configured. Therefore, the device is ready to run a `CEView` application with the `TWCAT` and exchange data with the `TwinCAT` runtime, which is running in the remote PC.

Please consult the *TWCAT User Manual* (`TWCAT.PDF`) for detailed information about how to configure the `TWCAT` driver worksheets.



## VII. Revision

Rev.	Date	Author	Comments
A	Jul/19/2005	Andre Bastos	Initial version