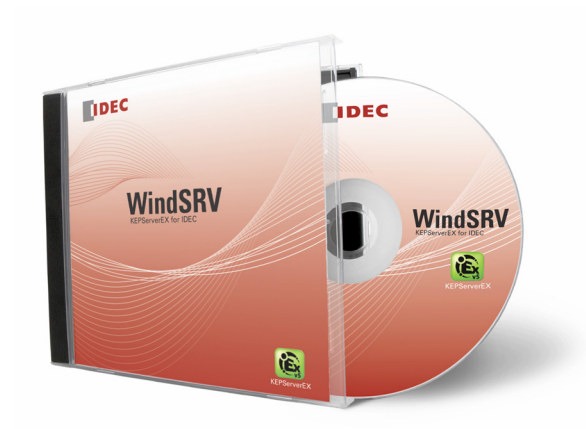


# Configuring WindSRV (KEPServerEX5) OPC Server Software

Serial Communication  
with IDEC MicroSmart Pentra PLCs



## Overview

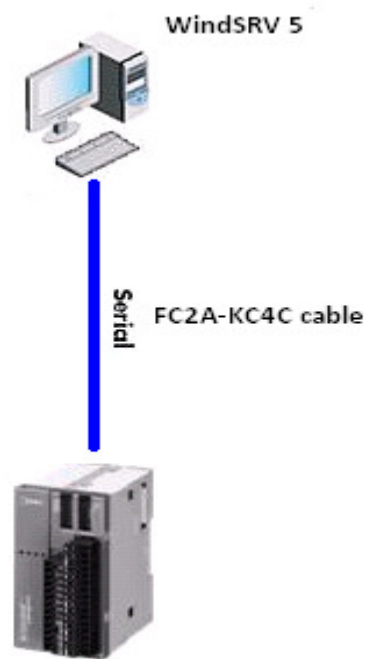


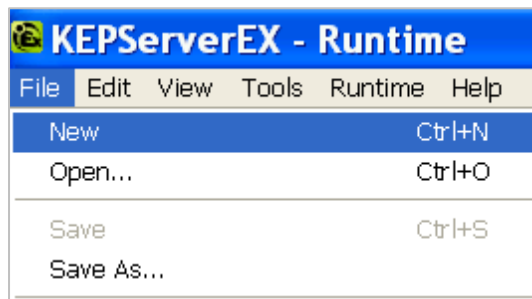
Fig. 1: Serial connections

The purpose of this document is to give step-by-step instructions on how to configure WindSRV (aka KEPServerEX) for Serial communications.

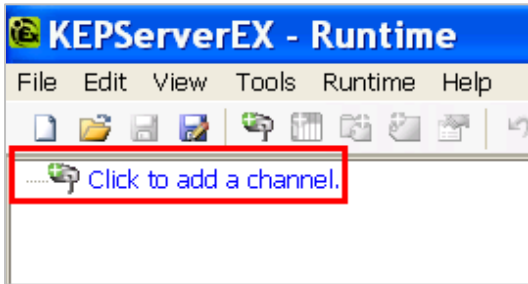
### Parts Used

- FC5A MicroSmart Pentra CPU
- FC2A-KC4C cable for serial connections

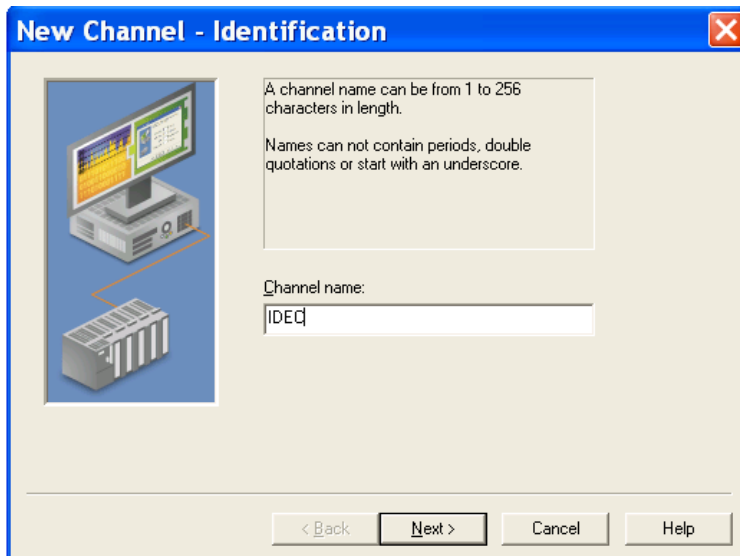
1. Launch KEPServerEX 5
2. Click *File* → *New*



3. Click *Click to add a channel.*



4. The New Channel – Identification dialog box will appear.
5. Under Channel name, assign a name for your project. For the purpose of this example, we'll use IDEC as the channel name. Click *Next*.

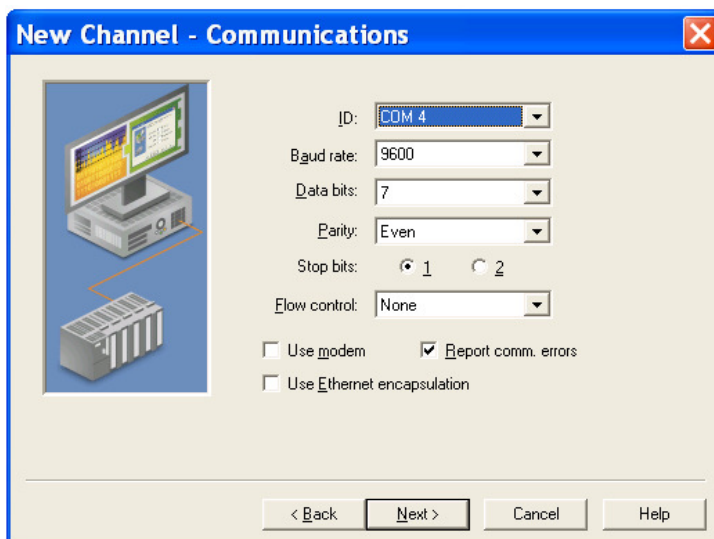


6. Select *Idec Serial* under Device driver. Click *Next*.

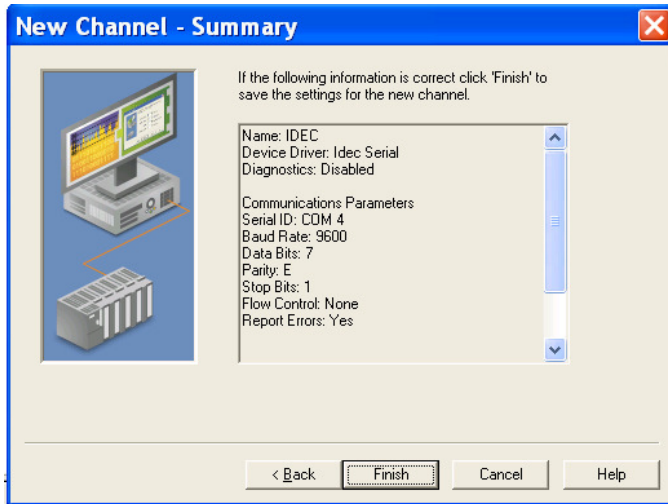


7. Under New Channel – Communications, make sure the serial settings match the MicroSmart Pentra settings. Since the MicroSmart Pentra default settings are 9600, 7, Even, 1, None, we'll use these parameters. Click *Next*.

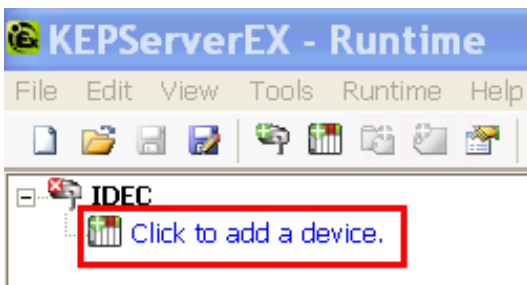
ID = Available COM port on your PC  
 Baud rate = 9600  
 Data bits = 7  
 Parity = Even  
 Stops bits = 1  
 Flow control = None



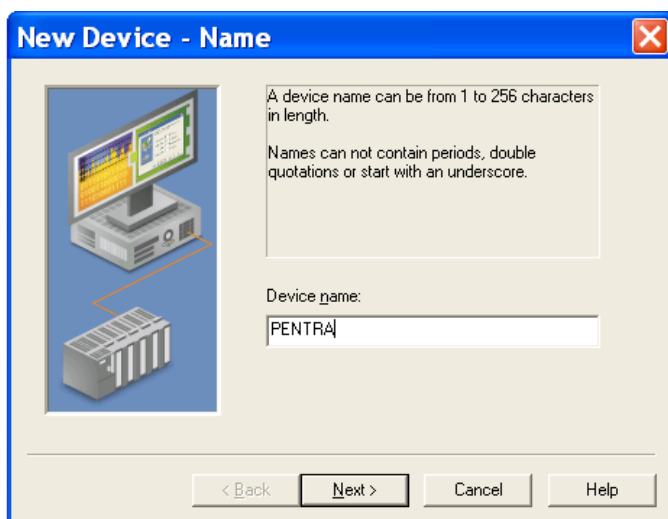
8. New Channel – when Write Optimizations dialog box appears, click [Next](#).
9. New Channel – when Summary dialog box appears, click [Finish](#).



10. Click [Click to Add a Device](#).



11. Under New Device – Name assign a device name for your project. For the purpose of this example, we'll use PENTRA as the device name. Click [Next](#).



12. Under New Device – Device Model, select *MicroSmart*.



13. New Device – ID dialog box appears, click *Next*.

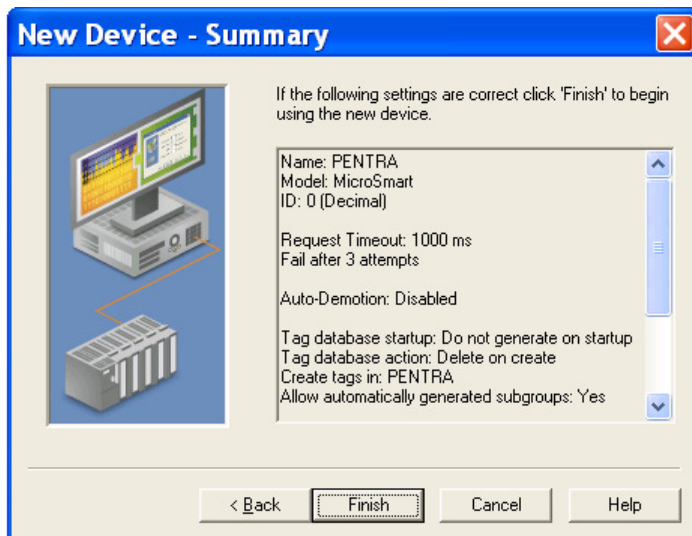
14. New Device – Timing dialog box appears, click *Next*.

15. New Device – Auto Demotion dialog box appears, click *Next*.

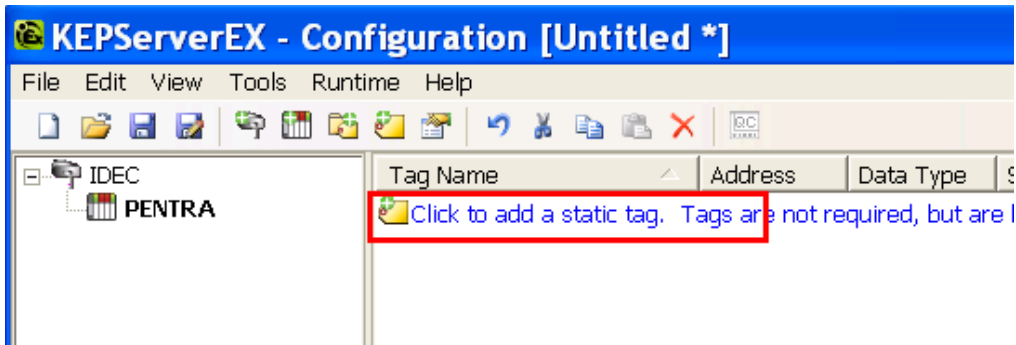
16. New Device – Database Creation dialog box appears, click *Next*.

17. New Device – Tag Import Setting dialog box appears, click *Next*.

18. New Device – Summary dialog box appears, click *Finish*.

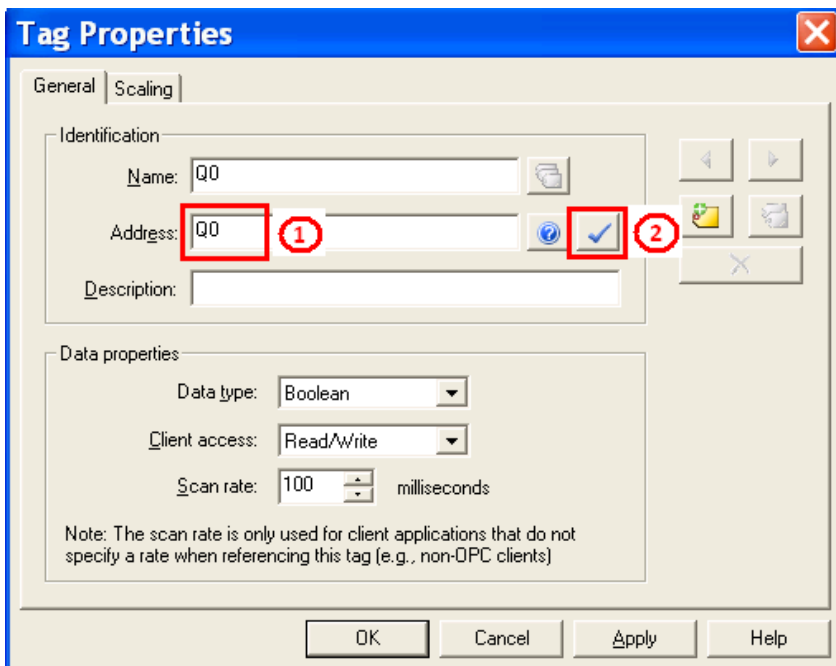


19. Click [Click to add a static tag.](#)



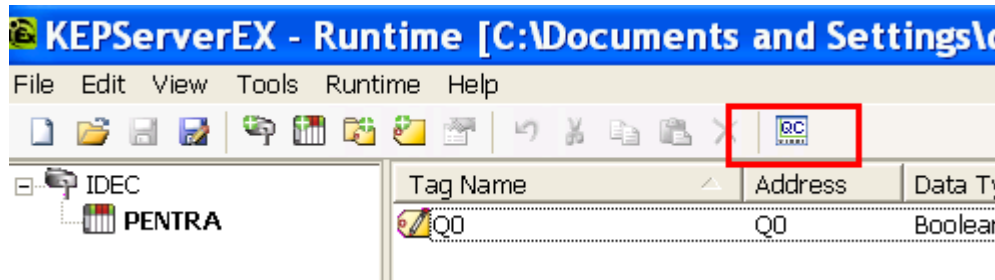
20. When the Tag Properties dialog box appears, enter the PLC Address you want to monitor. For the purpose of this example, we will monitor output Q0.

- Enter Q0 into the Name and Address fields (see ① below)
- Click the check mark button (see ② below)
- Click [Apply](#)

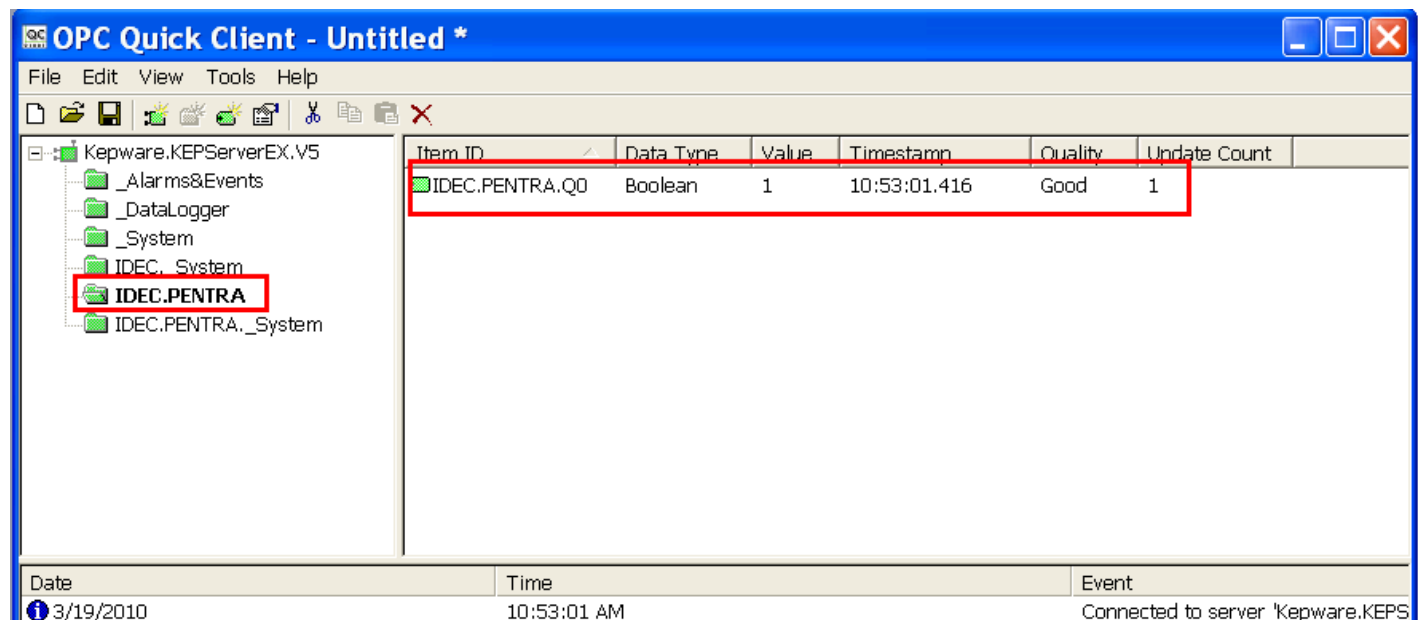


21. Click [OK](#).

22. Click OPC Quick Client icon.



23. OPC Quick Client window appears, select *IDEC.PENTRA*. You have successfully established connections between WindSRV and the IDEC PLC if the Quality is showing “Good.”



24. Launch Microsoft Excel.

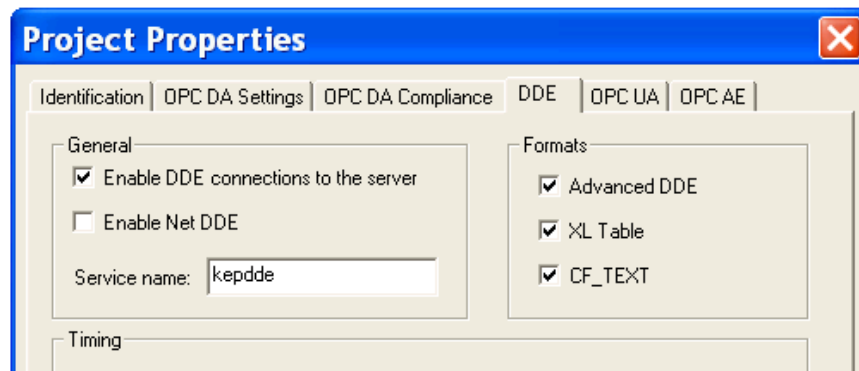
25. Type the following command into one of the cells in Excel:

`=kepdde|_ddedata!IDEC.PENTRA.Q0`

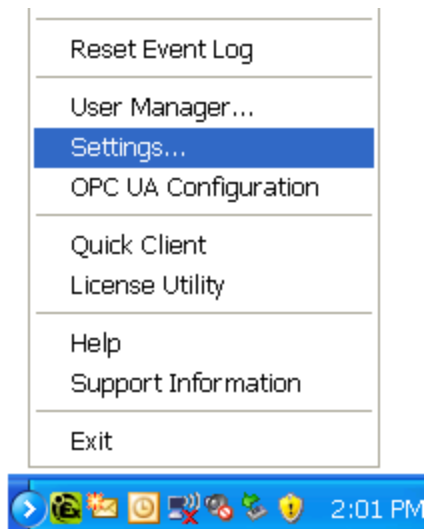
(Note: where IDEC = Channel name, PENTRA = Device name and Q0 = PLC Address)



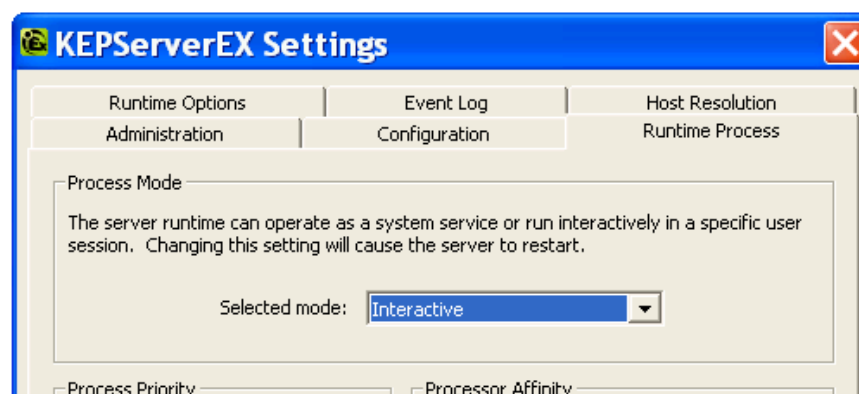
26. If Excel is NOT communicating with the connected PLC, please check the following settings:
- Make sure *Enable DDE connections to the server* is checked.
    1. Click File → Project Properties
    2. Under DDE tab, check *Enable DDE connections to the server*. Click **OK**.



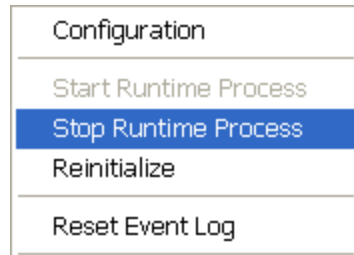
- Make sure **Runtime Process** is set to Interactive.
  1. On system tray, right mouse click on the **Ex** administration icon and select **Settings**. (**Ex** administration icon can also be launched from *Start → All Programs → Kepware → KEPServerEX 5 → KEPServerEX5 Administration*)



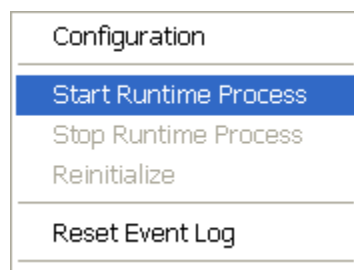
2. Click **Runtime Process** tab. Under Selected mode, select **Interactive**. Click **OK**.



3. On system tray, right mouse click **Ex** administration icon and select **Stop Runtime Process**.



4. On system tray, right mouse **Ex** administration icon again and select **Start Runtime Process**.



Using Excel, you will now be able to monitor all the parameters in the MicroSmart Pentra PLC.

For any further questions, please contact Technical Support at [support@idec.com](mailto:support@idec.com) or call 1-800-262-IDEC (4332) extension 2.