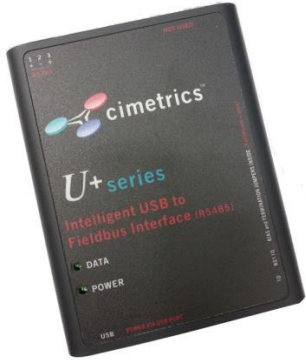




Using the U+4 with BACnet Explorer and Wireshark



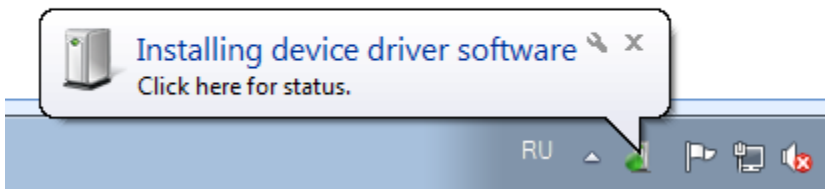
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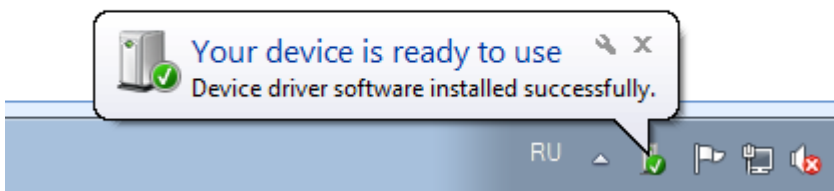
Installation instructions

1. REMOVE the U+4 hardware device from the computer and do not connect it until installation is complete.
2. Have the drivers ready (they included with your U+4 device).

Plug U+4 into USB port – the drivers will start and will be installed automatically.



When it prompts you for the drivers locate the drivers that came with your U+4 device.



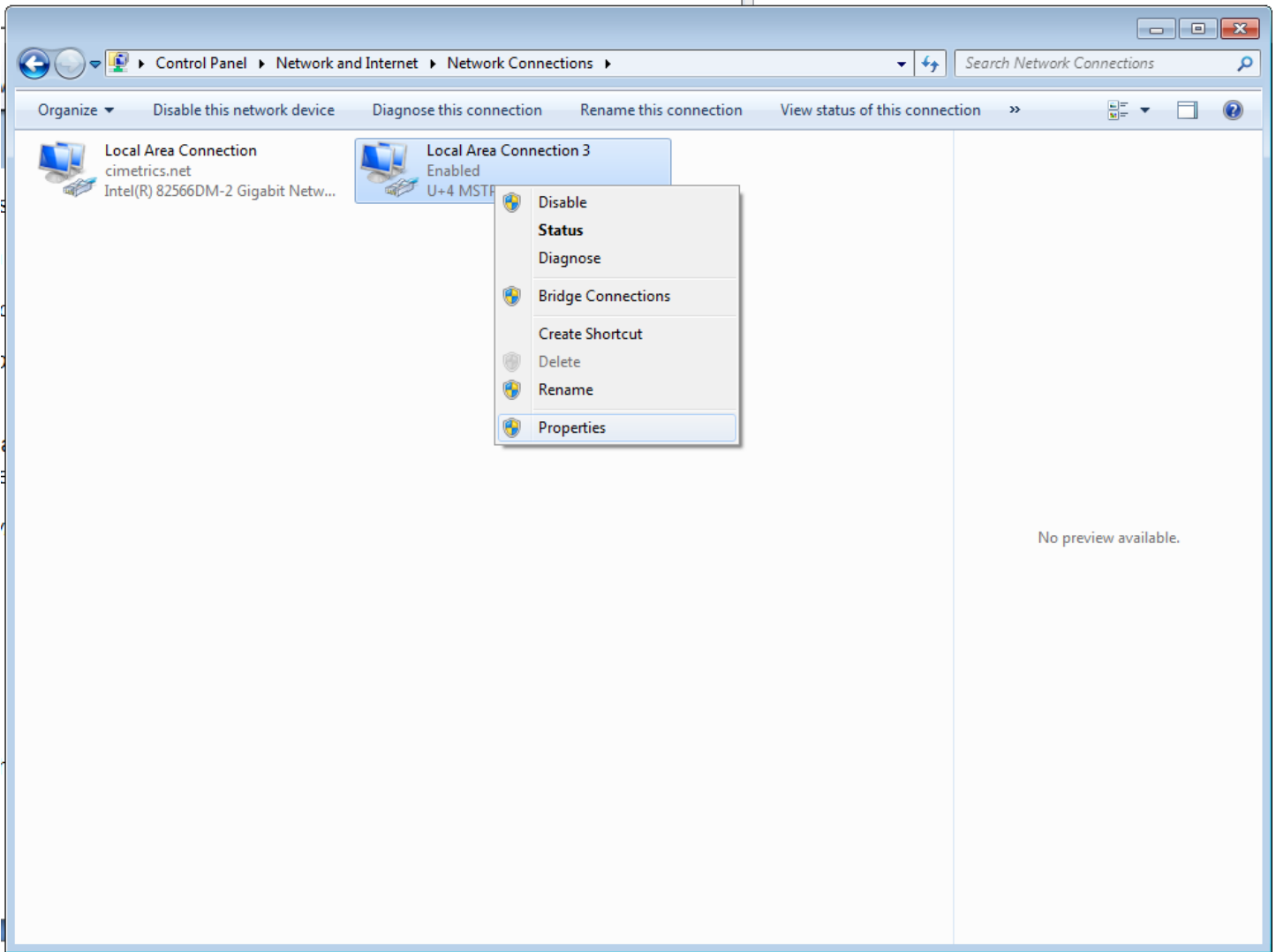
Configuration

Now go Network Connections. Go into configuration settings:

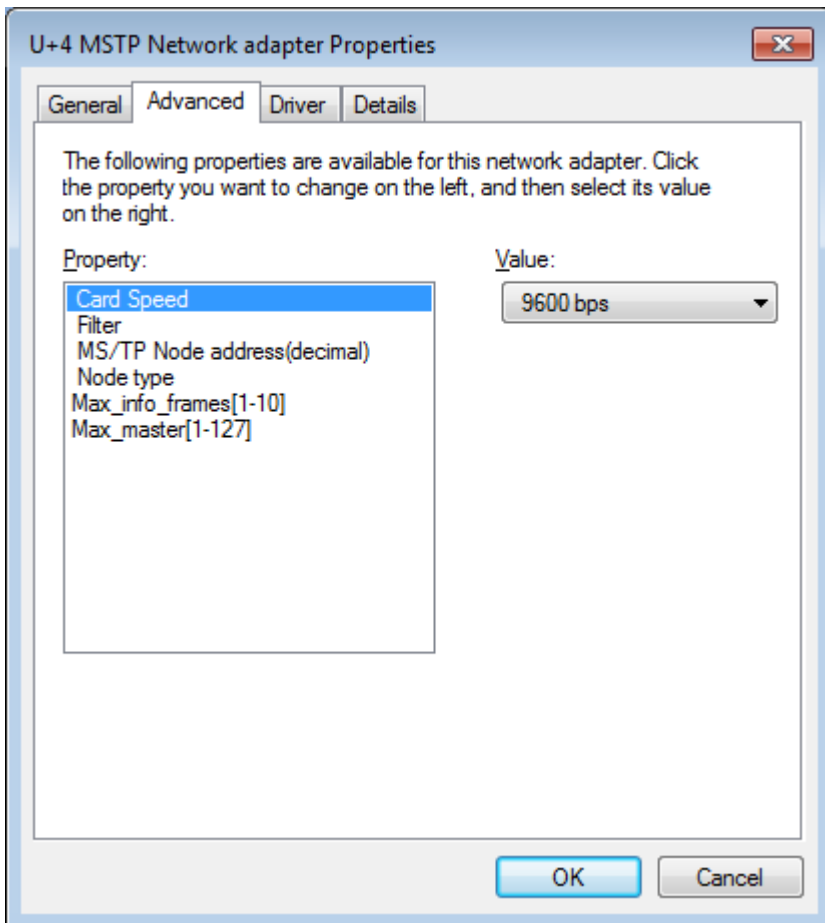
Windows 7, 8, 10 - Start | Control Panel | Network and Internet | Network and Sharing Center | Change Adapter Settings

Then right click on a new **Local Area Connection x** (where x is one more than you normally have on your machine = new MS/TP connection). Choose **Properties**.

Note: The U+4 hardware device must be connected for this to be displayed.



Go to **Configure – Advanced**



Settings

Card Speed:

Select needed Baud rate (in the range from 9600 to 115200 bps) from the list. The speed should match the configuration on your network.

Filter:

Select what kind and format of packets you want receive:

-*All* - to receive all packets (including tokens and service messages). Choose this setting for BACnet Explorer.

-*All BACnet data* - to receive all MS/TP frames transporting BACnet NPDU,

-*Directed BACnet data* - to receive MS/TP frames with BACnet NPDU, destined only to our Node Address and Broadcasts,

-*Directed BACnet NPDU only* - to receive only directed or Broadcast NPDU (accepted by any BACstac version). MS/TP information is absent.

Node Address:

Set address of this node in the range [0-254].

IMPORTANT Note: Master node must be in the range [0-Max_master]. Master Node address should be different than other MS/TP devices addresses on a network.

Higher address can be set for monitor mode only (to track some slave node activity).

Node Type:

Select *Monitor* or *Master* Node: Master Node takes part in token passing and needed for BACstac. Use this setting for BACnet Explorer.

Max_info_frames[1-10]: Max number of frames the node may sent before it must pass the token.

Max_master[1-127]: Highest allowable address for master nodes.

U+4 device with BACnet Explorer application.

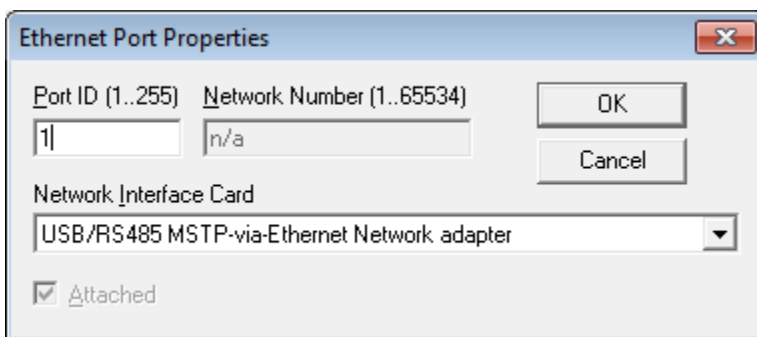
The Cimetrics BACnet Explorer is a BACnet Client application that enables the discovery of BACnet networks and BACnet devices.

NOTE: The U+4 hardware device must be connected to PC and U+4 MS/TP driver must be installed.

Install Wincap from www.winpcap.org/install

Configure BACstac to work with MS/TP interface. Go to *Start – All Programs – Cimetrics BACnet Explorer – BACnet Protocol configuration*. You can also access BACnet Protocol Configurator from BACnet Explorer – *Tools – Settings – BACnet Protocol Configuration*.

Add new Ethernet connection – choose USB MSTP adapter in the *Network Interface Card*:



Leave port number default 1. Click ok and restart BACstac.

NOTE: Any MS/TP device (with BACnet support) must be connected to U+4 device.

Use U+4 device with Wireshark

Wireshark is a network packet analyzer. A network packet analyzer will try to capture network packets and tries to display that packet data as detailed as possible.

NOTE: The U+4 hardware device must be connected to PC and U+4 MS/TP driver must be installed.

1. Start the Wireshark application.
2. Select U+4 device from the list of available capture interfaces.

You can use for it "List the available capture interfaces..." button (Toolbar panel) or Capture/Interfaces from main menu. See Figure.



3. Start capture.