

Using the U+4 B2110 with BACnet Explorer and Wireshark



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Installation instructions Refer to U4_USB_to_BACnet_MSTP_Interface_Installation_Guide.docx https://www.cimetrics.com/products/b2110-bacnet-mstp-interface

Configuration

Now go Network Connections. Go into configuration 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.

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(@ _	😰 🕨 Control Panel 🕨 Network ar	nd Internet 🕨 Network Co	nnections 🕨	- - 4j }	Search Networ	k Connections		٩
	Organize 🔹	 Disable this network device 	Diagnose this connecti	on Rename this connection	View status of this connec	tion »	== ₩=		0
		ocal Area Connection timetrics.net ntel(R) 82566DM-2 Gigabit Netw	Local Area Con Enabled U+4 MSTR	nection 3 Disable Status Diagnose Bridge Connections Create Shortcut Delete Rename Properties		No	preview availab	le.	

Go to Configure - Advanced

U+4 MSTP Network adapter Properties	×
General Advanced Driver Details	
The following properties are available for the property you want to change on the on the right.	r this network adapter. Click left, and then select its value
Property: Card Speed Filter MS/TP Node address(decimal) Node type Max_info_frames[1-10] Max_master[1-127]	<u>V</u> alue: 9600 bps ▼
	OK Cancel

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 [O-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:

Ethernet Port Pr	operties	×
Port ID (1255)	<u>N</u> etwork Number (165534) n/a	OK Cancel
Network Interfac	e Card	
Network Interfac	e Card STP-via-Ethernet Network adapter	

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.