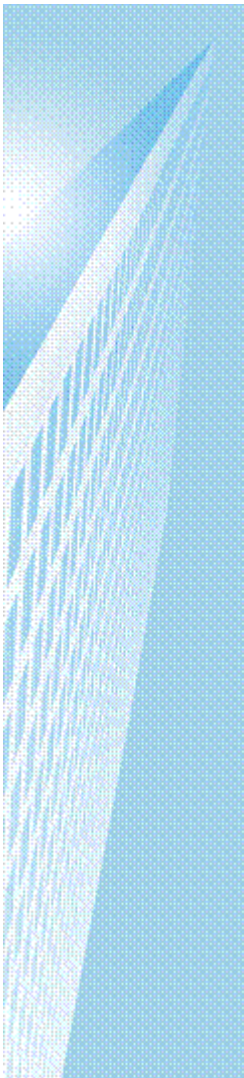


Cimetrics, Inc

B6130 BACnet/IP to Modbus Devices interface (flex-mediator)



User Manual

V.1

December, 2012

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Introduction



The B6130 enables integrating two Modbus TCP or RTU Steam, BTU or Electrical Meters with an existing BACnet Compliant Building Automation System. Using this, you can offer solutions which save money and improve building comfort.

The Ethernet connection conforms to the BACnet/IP standard which is complemented by many network friendly features such as password protected, browser-based setup screens. The B6130 has a built in web server that allows users to log in using a web browser. Once a user is logged in, configuration is easy and very self explanatory.

Once the B6130 is completely configured and connected to the Building Automation Network, using a BACnet client like the Cimetrics BACnet Explorer, a user can look at the newly configured meters as BACnet Devices.

Meter templates are created with the Win32 utility MbTemplate.exe and can be uploaded into the B6130 Eplus box during the setup procedure.

Note! We strongly recommend that the power be recycled on the unit at least once every six months

Before you start

Have the following ready:

- PC/laptop
- Hub
- Ethernet cable/patch cable
- B6130 with power supply
- MBTemplate tool
- Modbus map for registers of your Modbus device you plan to map; e.g.

	Parameter	Register	R/W	Type	Bytes	Description
1	Core Calculated Velocity	41200	R	float	4	Fluid velocity, (ft/sec)
2	Core Volume	41202	R	float	4	Volumetric flow (ft^3/sec)
3	Core Temp 1	41204	R	float	4	Temperature input 1, (F)
4	Core Temp 2	41206	R	float	4	Temperature input 2, (F)
	Core RTD Temp	41208	R	float	4	Internal RTD temperature (F)

- Knowledge of you Modbus device ID, IP address (if it is Modbus TCP device), baud rate and serial mode.

Now insert objects:

- Press "Add object".
-

- Enter an object name, following the Cimetrics naming conventions. At first, try to find an appropriate name from the dropdown list.
- Enter the Starting Register. Note that it is not the Modbus address; it is a register address from the documentation. The Modbus address will be calculated inside the B6130 software by subtracting the Register offset from the Starting Register.
- Select the data type from the dropdown list. This can be any of :

- Unsigned 16-bit integer
- Signed 16-bit integer
- Unsigned 32-bit integer, MSW first
- Signed 32-bit integer, MSW first
- Unsigned 32-bit integer, LSW first
- Signed 32-bit integer, LSW first
- Float 32-bit, MSW first
- Float 32-bit, LSW first

The formats above are most popular formats using in many Modbus meters.

The MSW abbreviation means that registers are transmitted in the order of Most Significant Word (High-Order register) first. The LSW abbreviation is Least Significant Word first.

- Signed 32-bit integer Modulus-10000, MSW first

Used in ION-meters for Energy calculation.

The 32-bit value can be retrieved by the following calculation:

$$\text{Value} = \text{register_high} \times 10000 + \text{register_low}$$

- Signed 64-bit integer Modulus-10000, LSW first
Used in PM800 for Energy calculation.

Since 64-bit data storage is not supported in B6130 software, only 9 low decimal digits will be extracted from whole 64-bit value

- DATE_TIME_M_D_Y1900_H_M_S (48 bits)
Used in PM800 meter.

Register 0: Hi byte is Month (1-12); Low byte is Day (1-31)

Register 1: Hi byte is Year (0-199, from 1900) ; Low byte is Hour (0-23)

Register 2: Hi byte is Minute (0-59); Low byte is Second (0-59)

- DATE_TIME_D_M_H_Y2000_S_M (48 bits)
Used in H8163 Energy meter.

Register 0: Hi byte is Day (1-31); Low byte is Month (1-12)

Register 1: Hi byte is Hour (0-23); Low byte is Year (0-99, from 2000)

Register 2: Hi byte is Second (0-59); Low byte is Minute (0-59)

- DATE_TIME_Y2000_M_D_H_M_S (48 bits)
Used in IQ Analyzer 6000/6200

Register 0: Hi byte is Year (0-199, from 2000); Low byte is Month (1-12)

Register 1: Hi byte is Day (1-31); Low byte is Hour (0-23)

Register 2: Hi byte is Minute (0-59); Low byte is Second (0-59)

- Signed 10-bit integer
Used as Power Factor format in PM800 meter. Bit number 15, the sign bit, bits 0–9 store a value in the range 0–1,000 decimal.

- Select units from the dropdown list.

The MBTemplate creation tool is capable of defining object units from the complete set of BACnet standard Engineering units. It can further allow the user to define proprietary units

(though this is not recommended). These units will be correctly communicated in BACnet for correct interpretation by BACnet clients. However, not all units from the complete set of units will be displayed in the B6130 web graphical user interface GUI for status. The B6130 cannot hold such a varied set. The units marked with a * in the MBTemplate tool are units which are portrayed in the B6130 web GUI. Units without a * are portrayed as a numeric in the B6130 web GUI.

- Enter Scale. The scale will be multiplied by contents of registers (according to data type) to get the real value.

Note that the MbTemplate utility creates simple templates. No programmable scales, units, etc... If scales are changed in the meter, create new template with actual scales (just modify existing template and save under another name).

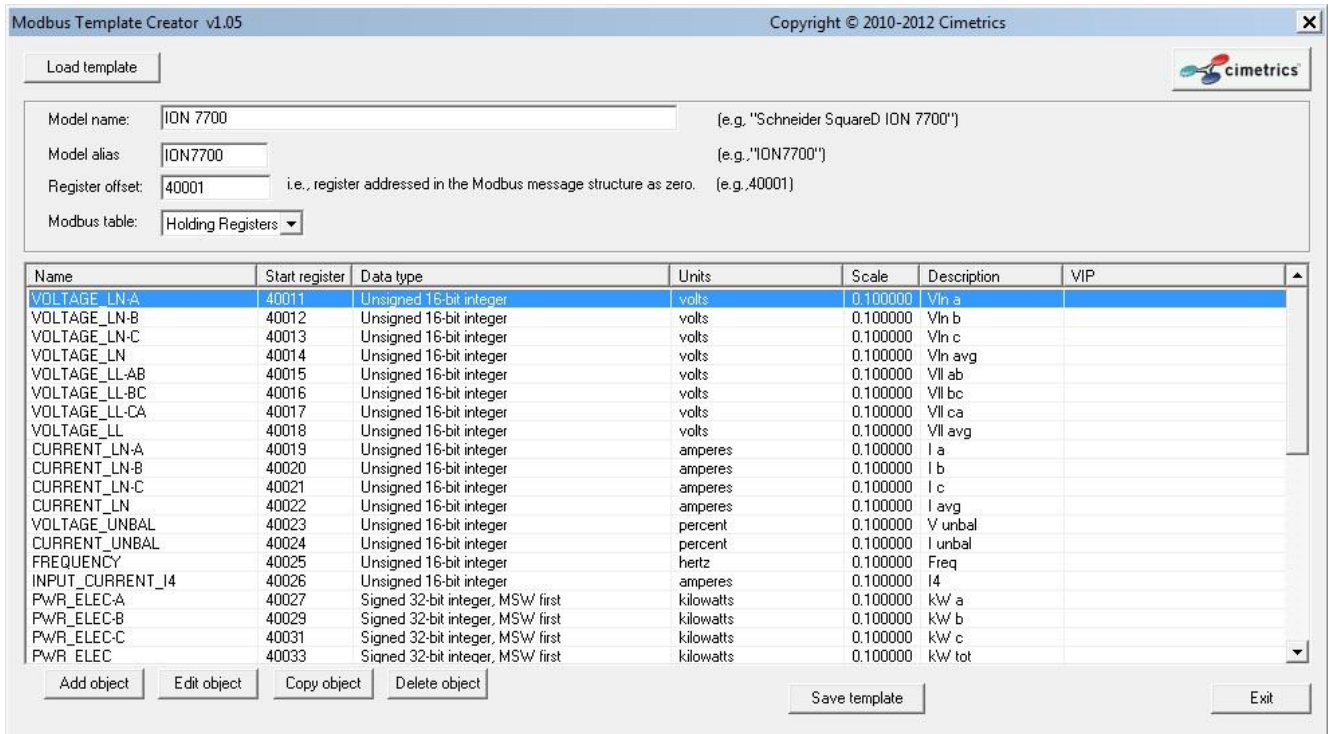
- Enter description. It should be a parameter name from the manufacturer's documentation.
- Click Very Important Parameter checkbox only if you want to display the value "Data Snapshot" table on the Home page of the Eplus B6130. Total amount of VIP-parameters should not exceed four parameters for the whole template.
- Press OK to complete creation/modification of the object.

Press "Add object" again and repeat the same steps for all other objects.

A maximum of 40 objects are allowed in the template.

For your convenience, a set of ready-to-use templates are supplied with this utility. These are templates for some of the meter models used in Cimetrics' Eplus B6030.

For example, to modify an ION7700-template (or to use it as a basis for similar model), press "Load template" and select the file M_ION7700.cmt.



Now you may edit registers, delete, and add new parameters. For this, use the buttons "Edit object", "Copy object", "Delete object", or right click on any object and select(or press the first letter) for action: "Add object", "Edit object", "Copy object" or "Delete object".

Finally, press "Save template" and "Exit". Move this template (with a .CMT extension) to any folder for further uploading into Eplus B6130.

Here is a list of predefined templates, supplied with MbTemplate utility, which could be a basis for your template:

- M_CONT1010.cmt - "Controlotron 1010 with 1015N COMM"
- M_D100.cmt - "Onicon F-2500"
- M_DT810.cmt - "Powernet Gateway-DigiTrip 810"
- M_EM6400.cmt- "Conzerv Power Max EM6400"
- MEMON3000.cmt- "Emon 3000"
- M_H8036.cmt- "Veris Hawkeye H8036"
- M_H8163_3.cmt- "Schneider SquareD Energy-Monitor EMxx"

M_ION6200.cmt- "ION 62x0"

M_ION7300.cmt- "ION73x0"

M_ION7500.cmt- "ION 75x0"

M_ION7700.cmt- "ION 77x0"

M_IQ230.cmt- "Cutler Hammer IQ 230M"

M_IQAN6000.cmt- "Powernet Gateway-IQ Analyzer 6x00"

M_KEP_STII.cmt- "KEP Supertrol Flow Computer ST-II"

M_MAG6000.cmt- "Magflo 6000"

M_NEXUS1260.cmt- "EIG Nexus 1260"

M_PM700.cmt- "PowerLogic PM710"

M_PM800.cmt- "PowerLogic PM800"

M_S4720.cmt- "Siemens 4720"

M_SHARK200.cmt - "EIG Shark 200"

M_SSTIII.cmt- "Siemens Static Trip III"

M_TEMCO.cmt- "Temco Tstat5"

Logging in

Connect the B6130 Ethernet connector to an Ethernet hub, and run another Ethernet cable (patch cable) from that hub to your laptop or PC. Make sure that the laptop or PC is the *only* other unit in this small LAN.

NOTE: If you do not have a hub, you can use a "crossover cable" to connect between the B6130 and your laptop.

Set your PC's IP address to **192.168.88.90** with a subnet mask of **255.255.255.252**

Open your browser and enter the following URL: <http://192.168.88.89>

You will be prompted to login: The username is = admin and the password = admin

From within the browser interface you can change all settings in the entry fields to configure your router

For improved access security, you should change your password from the default values. **Make sure you SAVE your new password!** When you click on "Activate Configuration" and "Confirm" then the configuration process is completed.

Please Note:

A user will be able to access the B6130 using the above mentioned IP address at ALL TIMES (even if you have changed the IP address under BACnet/IP settings)

B6130 Home Page

The Home Page displays four important Objects of each meter that has been configured (see VIP option in MbTemplate.exe). The example below shows that this B6130 is connected to two different meters and four important objects from each of those meters. This is not user configurable as it is only a snapshot of the meters configured.

The screenshot shows the B6130 - BACnet/IP to 2 ch. EasyMAP web interface. On the left is a navigation menu with options: Home, BACnet/IP Settings, Devices Configuration, BACnet Objects Status, Change Password, Statistics, Reset Configuration, and Activate Configuration. The main content area is titled "BACnet/IP to 2 ch. EasyMAP (flexi-mediator)" and shows a MAC address of 00:20:4A:86:19:30. Below this is a "Data Snapshot" table with the following data:

Object Name	Value	Unit
DEVICE-1/PWR_FACTOR_PCT	unavailable	percent
DEVICE-1/ENERGY_ELEC_ACCUM	unavailable	kilowatt-hours
DEVICE-1/DEMAND	unavailable	kilowatts
DEVICE-1/DEMAND_PEAK	unavailable	kilowatts
DEVICE-2/TEMPERATURE	10.1	
DEVICE-2/COOL_VALVE	10.2	percent
DEVICE-2/HEAT_VALVE	10.3	percent
DEVICE-2/SPEED	137	

Below the table, it lists "Templates uploaded:" including Schneider SquareD PowerLogic PM800 and Temco Tstat5. At the bottom of the main area are three buttons: "Download configuration", "Upload configuration", and "Download B6130data.csv". The footer contains copyright information for 2010-2012 Cimetrix Inc. and the version B6130 v1.1-43-c2290-2.02.

Download Configuration:

Clicking on this button will initiate a download of the existing configuration. This will be downloaded as a text file. This file can be saved for uploading (without any edits) in the future to restore a previous configuration.

An example of the configuration file that is downloaded is shown below

B6130 configuration:

MBRouterPort=502

BaudRate=9600

SerialMode=8-N-1

PollingInterval=30

M1_Model=1 (PM800)

M1_Protocol=RTU

M1_ID=1

M1_Polling=Periodically

M1_Description=My meter-1

M2_Model=2 (TEMCO)

M2_Protocol=TCP

M2_IP=192.168.0.1

M2_Polling=Periodically

M2_Description=My meter-2

IP=192.168.0.22/255.255.255.0; gtw=192.168.0.1; deviceID=1488272;

MAC=00:20:4A:86:19:30

Upload Configuration:

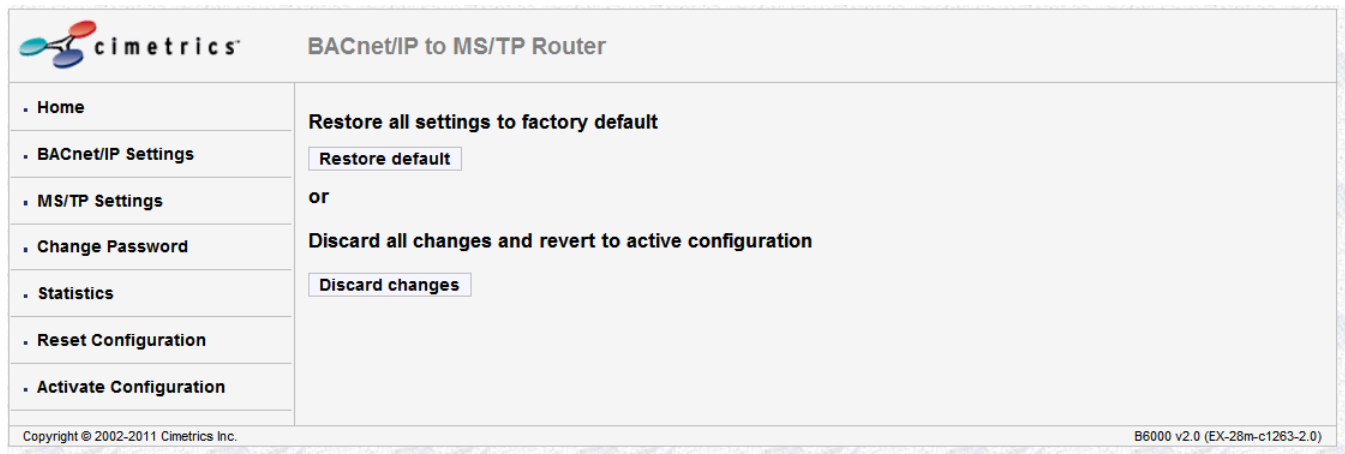
By clicking on this button, a user can upload a previously saved configuration file (text). This will restore the configurations to the one in the uploaded file.

Download B6130data

Using the "Download B6130data" feature, a user can export a log of 50 most recent records of VIP parameters into a "comma-separated-variable" (.csv) format file.

Reset Configuration

Clicking on **Restore default** will reset the entire device's configuration to factory defaults. Clicking on **Discard changes** will discard all changes and revert to the previous active configuration.



The screenshot shows a web interface for a BACnet/IP to MS/TP Router. The top left features the Cimetrics logo. The main title is "BACnet/IP to MS/TP Router". On the left is a navigation menu with the following items: Home, BACnet/IP Settings, MS/TP Settings, Change Password, Statistics, Reset Configuration, and Activate Configuration. The "Reset Configuration" item is selected. The main content area displays the following text: "Restore all settings to factory default", a "Restore default" button, "or", "Discard all changes and revert to active configuration", and a "Discard changes" button. At the bottom left, it says "Copyright © 2002-2011 Cimetrics Inc." and at the bottom right, it says "B6000 v2.0 (EX-28m-c1263-2.0)".

BACnet IP Settings

B6130 - BACnet/IP to 2 ch. EasyMAP

BACnet/IP Settings

This page allows you view current BACnet/IP settings, change BACnet/IP settings or restore them to factory default.

Parameter	Value	Description
IP Address	192.168.0.22	IP address of the Device.
Network Mask	255.255.255.0	Subnet mask.
Default Gateway	192.168.0.1	IP address of default gateway.
BACnet UDP Port	47808	BACnet/IP UDP port number.
BACnet Device Number	1488272	Device ID. Default = 1488272 generated from MAC.
BBMD IP Address		IP address of target BBMD for the Foreign Device to register. Entering IP address of target BBMD enables Foreign Device mode.
BACnet Device Location/Application	Cimetrix basement	Location/application string (0-63 characters) to help user find the Device Object Name.
Modbus/TCP Port for TCP to RTU Router	502	Default = 502. Enter 0 to disable TCP to RTU Router.
<input type="checkbox"/> Enable BACnet/IP Control Objects		Enable/Disable direct access to Modbus registers (for serial line devices only).

Advanced settings are better kept to factory default values. Changes to these settings might negatively impact operation of the device.

FD Subscription TTL: min. Effective only if BBMD address is set. It is recommended to set this number between 30 minutes and an hour.

Buttons:

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On this screen, a user can configure the following parameters:

1. **IP Address** – IP address of the device.
2. **Network Mask** – Subnet mask for the subnet your device is on.
3. **Default Gateway** – IP address of the subnet’s default gateway
4. **BACnet UDP Port** – BACnet UDP port number. (Default is 47808). In some cases e.g. a situation where it is desirable for two groups of BACnet devices to coexist independently on the same IP subnet, the UDP port may be configured locally to a different value.
5. **BACnet Device Number** - BACnet Device ID. Default = 1488272 generated from MAC.

6. **BBMD IP Address** –IP address of target BBMD for the Foreign Device to register. Entering IP address of target BBMD enables Foreign Device mode.

To find out more about Foreign device and BBMD visit:

<http://www.bacnet.org/Bibliography/ES-7-99/IPPART2.HTM>

<http://www.bacnet.org/Tutorial/BACnetIP/sld015.html>

7. **BACnet Device Location/Application** - A Description for the Device. Location/application string (0-63 characters) to help user find the Device Object Name.

8. **Modbus/TCP Port for TCP to RTU Router.** - The router provides ability to connect Modbus/TCP masters directly to Modbus RTU device. This capability is enabled if a non-zero Modbus/TCP port is specified. The default port is 502 (i.e., router is enabled).

9. **Enable BACnet/IP Control Objects.** – Enable/Disable direct access to Modbus registers (for serial line devices only)

Control Objects, if enabled, are presented by three Analog-Value BACnet objects:

1. 500001 is a writable object called MOD_ID_TARGET - "Target device identifier to be read/written - select". Since an EIG device has a hardcoded Modbus address = 1, just this value is needed to be entered before the first access to a Modbus register.

Default = -1.0 and -1 means also do not execute #500003 (read nor write)

2. 500002 is a writable object called MOD_REGISTER "Register to be read/written - select" (example - value 999 to access the first register of Volts A-N). Default = -1.0 (after any reboot) and -1 means also do not execute #500003 (read nor write)

3. 500003 is a readable/writable object called MOD_VALUE "Value to be read from or written to select register". The MOD_REGISTER will reset with -1 after every Read/Write (successful or not) from/to MOD_VALUE with valid MOD_ID_TARGET and MOD_REGISTER. Besides,

MOD_REGISTER will be reset to -1 in 30 sec after writing to it.

Advanced Settings

If you click on the **Advanced** button you will see the settings for the Foreign Device subscription Time to Live. Make sure you are familiar with this BACnet Foreign Device concept. Otherwise leave these settings as the defaults. If used, the recommended number is between 30 min. and an hour.

The “Restore default” button will reset all values on this, “BACnet/IP Settings”, page to factory default values.

Device Configuration

On this screen, a user can configure the two meters that will be integrated into the BACnet/IP network. If the configuration involves a Modbus RTU meter, the user will need to choose the appropriate baud rate and the serial mode. Please note that if you intend to configure multiple Modbus RTU meters, their baud rates need to be the same.

B6130 - BACnet/IP to 2 ch. EasyMAP

Devices Configuration

Settings for serial line devices (if any)

Parameter	Value	Description
Baud rate	9600	The baud rate of serial port. (Default=9600)
Serial Mode	8-N-1	Default mode: 8-N-1 (8 data bits, No parity, 1 stop bit)

Common settings

Parameter	Value	Description
Polling Delay	30	Idle time(in sec) between the end of one poll and the start of the next. Default=30 sec. Range: [5-3600]. The Polling Delay is actual only for devices with "Polling" parameter set to "Periodically"

Device 1 Configuration

IP		IP Address used by the Modbus/TCP device. Empty IP means Modbus/RTU
Modbus ID	1	Address of remote device connected on a serial line. Valid range: [1-247] for Modbus/RTU or Modbus/TCP router. Empty(or 0) for Modbus/TCP device.
Polling	<input checked="" type="radio"/> Periodically <input type="radio"/> On demand	How to update values: On demand(by user) or Periodically(using Polling Delay)
Description	My meter-1	Device description (up to 63 characters)
Device Model	<input type="button" value="Upload template"/> <input type="button" value="Delete template"/>	Current template: Schneider SquareD PowerLogic PM800

Device 2 Configuration

IP	192.168.0.1	IP Address used by the Modbus/TCP device. Empty IP means Modbus/RTU
Modbus ID		Address of remote device connected on a serial line. Valid range: [1-247] for Modbus/RTU or Modbus/TCP router. Empty(or 0) for Modbus/TCP device.
Polling	<input checked="" type="radio"/> Periodically <input type="radio"/> On demand	How to update values: On demand(by user) or Periodically(using Polling Delay)
Description	My meter-2	Device description (up to 63 characters)
Device Model	<input type="button" value="Upload template"/> <input type="button" value="Delete template"/>	Current template: Temco Tstat5

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On this screen, a user can configure the following parameters:

1. **Baud Rate** – The baud rate of serial port. (Default = 9600).

2. **Serial Mode** – Default mode 8-N-1 (8 data bits, No parity 1 stop bit).

3. **Polling Delay** – Idle time (in sec) between the end of one poll and the start of the next. Default = 30 sec. Range: [5-3600]. The Polling Delay is actual only for devices with “Polling” parameter set to “Periodically”.

Device Configuration

4. **IP** – IP address used by the Modbus/TCP device. Empty IP Address field means Modbus/RTU.

5. **Modbus ID** – Address of remote device connected on a serial line. Valid range: [1-247] for Modbus/RTU or Modbus/TCP router. Empty (or 0) for Modbus/TCP device.

6. **Polling** –Specify here how you would like the values to be updated. On demand (by user) or Periodically (using Polling Delay).

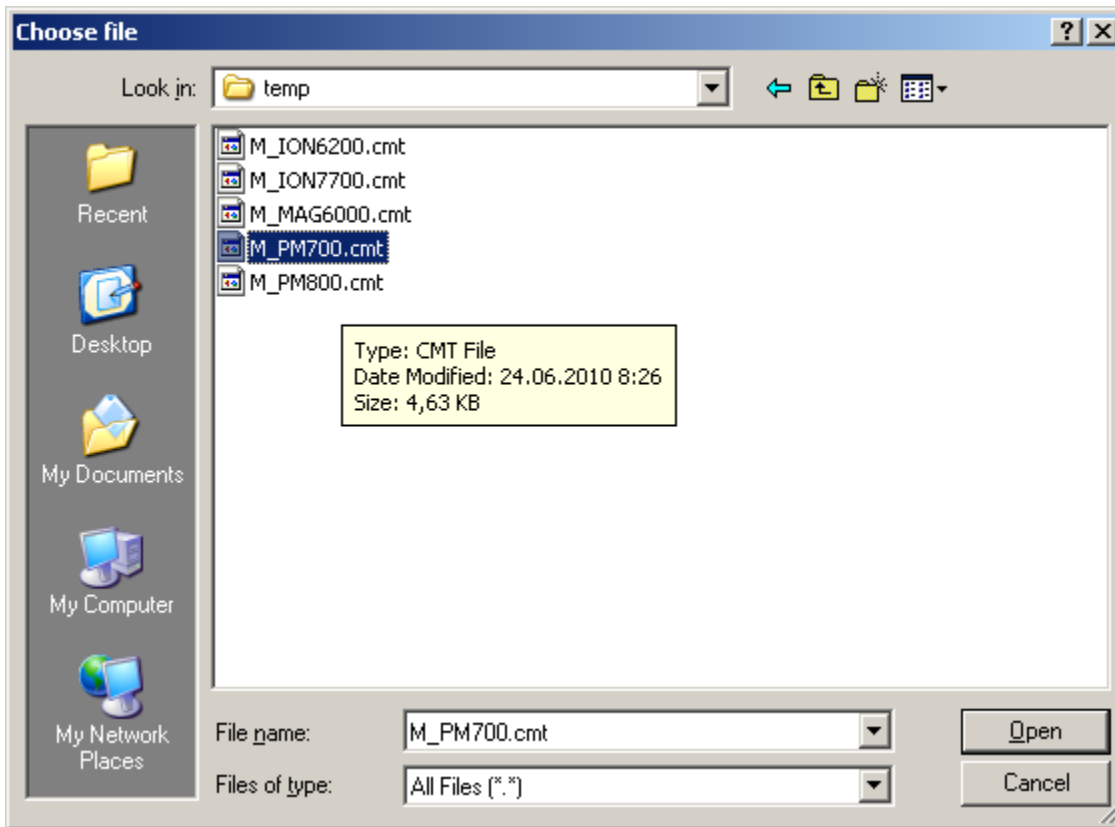
7. **Description** – Device description (up to 63 characters)

8. **Device Model** – here you upload/delete a template:

The template to be integrated is uploaded when the “Upload template” button is selected.



Press”Browse” and select a file (with .cmt extension) created with the MbTemplate utility (see chapter 2).



Once the upload is complete, the IP address of the Modbus device can be entered. This value can be omitted if the meter is a Modbus RTU meter. The Modbus ID along with the option of polling and a description can also be entered. Once this process is completed for the two meters, the configuration is complete.

Some extra settings which are not visible in the user interface:

To change to the standard Modbus TCP port 502, combine the IP address with the Port number using a colon (for example, 192.168.0.22:503).

To force using the Ethergate protocol instead of Modbus/TCP, use a prefix 'e' before the port number (for example, 192.168.0.22:e7700).

Restore default:

Clicking on this button will reset the page to factory defaults.

BACnet Object Status

On this screen, a user can view the BACnet Objects of each of the configured Meters. The following parameters of each BACnet Object are viewable

Object Name

Object ID


Present Value

Units

Reliability

Description

The information on the page gives the user a snapshot of the entire configuration

 B6130 - BACnet/IP to 2 ch. EasyMAP																																																																																																																																											
• Home	BACnet Objects Status																																																																																																																																										
• BACnet/IP Settings	Configuration: IP=192.168.0.22/255.255.255.0; Default gateway=192.168.0.1; BACnet port=47808 Meter-1=Modbus/TCP; Meter-2=Modbus/TCP;																																																																																																																																										
• Devices Configuration																																																																																																																																											
• BACnet Objects Status	<table border="1"> <thead> <tr> <th>Object Name</th> <th>Object ID</th> <th>Present Value</th> <th>Units</th> <th>OK</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>B6130-1488272</td> <td>1488272</td> <td>-</td> <td>-</td> <td>-</td> <td>1=My meter-1:PM800,(192.168.0.1); 2=My meter-2:TEMCO,(192.168.0.1)</td> </tr> <tr> <td>POLL_DELAY</td> <td>AV-1</td> <td>30</td> <td>seconds</td> <td>yes</td> <td>Polling Delay</td> </tr> <tr> <td>DEVICE-1/CURRENT_LN-A</td> <td>AI-101100</td> <td>1100</td> <td>amperes</td> <td>yes</td> <td>My meter-1:Current,A</td> </tr> <tr> <td>DEVICE-1/CURRENT_LN-B</td> <td>AI-101101</td> <td>1101</td> <td>amperes</td> <td>yes</td> <td>My meter-1:Current,B</td> </tr> <tr> <td>DEVICE-1/CURRENT_LN-C</td> <td>AI-101102</td> <td>1102</td> <td>amperes</td> <td>yes</td> <td>My meter-1:Current,C</td> </tr> <tr> <td>DEVICE-1/CURRENT_NG</td> <td>AI-101103</td> <td>1103</td> <td>amperes</td> <td>yes</td> <td>My meter-1:Current,Neutral</td> </tr> <tr> <td>DEVICE-1/CURRENT_LN</td> <td>AI-101105</td> <td>1105</td> <td>amperes</td> <td>yes</td> <td>My meter-1:Current,3-Phase Avg</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LL-AB</td> <td>AI-101120</td> <td>1120</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,A-B</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LL-BC</td> <td>AI-101121</td> <td>1121</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,B-C</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LL-CA</td> <td>AI-101122</td> <td>1122</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,C-A</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LL</td> <td>AI-101123</td> <td>1123</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,L-L Avg</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LN-A</td> <td>AI-101124</td> <td>1124</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,A-N</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LN-B</td> <td>AI-101125</td> <td>1125</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,B-N</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LN-C</td> <td>AI-101126</td> <td>1126</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage,C-N</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_NG</td> <td>AI-101127</td> <td>1127</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage, N-R</td> </tr> <tr> <td>DEVICE-1/VOLTAGE_LN</td> <td>AI-101128</td> <td>1128</td> <td>volts</td> <td>yes</td> <td>My meter-1:Voltage, L-N Avg</td> </tr> <tr> <td>DEVICE-1/PWR_ELEC-A</td> <td>AI-101140</td> <td>-1140</td> <td>kilowatts</td> <td>yes</td> <td>My meter-1:Real Power,A</td> </tr> <tr> <td>DEVICE-1/PWR_ELEC-B</td> <td>AI-101141</td> <td>-1141</td> <td>kilowatts</td> <td>yes</td> <td>My meter-1:Real Power,B</td> </tr> <tr> <td>DEVICE-1/PWR_ELEC-C</td> <td>AI-101142</td> <td>-1142</td> <td>kilowatts</td> <td>yes</td> <td>My meter-1:Real Power,C</td> </tr> <tr> <td>DEVICE-1/PWR_ELEC</td> <td>AI-101143</td> <td>-1143</td> <td>kilowatts</td> <td>yes</td> <td>My meter-1:Real Power,Tot</td> </tr> <tr> <td>DEVICE-1/PWR_ELEC_REACT-A</td> <td>AI-101144</td> <td>-1144</td> <td>kilovolt- amperes- reactive</td> <td>yes</td> <td>My meter-1:Reactive Power,A</td> </tr> <tr> <td></td> <td></td> <td></td> <td>kilovolt-</td> <td></td> <td></td> </tr> </tbody> </table>	Object Name	Object ID	Present Value	Units	OK	Description	B6130-1488272	1488272	-	-	-	1=My meter-1:PM800,(192.168.0.1); 2=My meter-2:TEMCO,(192.168.0.1)	POLL_DELAY	AV-1	30	seconds	yes	Polling Delay	DEVICE-1/CURRENT_LN-A	AI-101100	1100	amperes	yes	My meter-1:Current,A	DEVICE-1/CURRENT_LN-B	AI-101101	1101	amperes	yes	My meter-1:Current,B	DEVICE-1/CURRENT_LN-C	AI-101102	1102	amperes	yes	My meter-1:Current,C	DEVICE-1/CURRENT_NG	AI-101103	1103	amperes	yes	My meter-1:Current,Neutral	DEVICE-1/CURRENT_LN	AI-101105	1105	amperes	yes	My meter-1:Current,3-Phase Avg	DEVICE-1/VOLTAGE_LL-AB	AI-101120	1120	volts	yes	My meter-1:Voltage,A-B	DEVICE-1/VOLTAGE_LL-BC	AI-101121	1121	volts	yes	My meter-1:Voltage,B-C	DEVICE-1/VOLTAGE_LL-CA	AI-101122	1122	volts	yes	My meter-1:Voltage,C-A	DEVICE-1/VOLTAGE_LL	AI-101123	1123	volts	yes	My meter-1:Voltage,L-L Avg	DEVICE-1/VOLTAGE_LN-A	AI-101124	1124	volts	yes	My meter-1:Voltage,A-N	DEVICE-1/VOLTAGE_LN-B	AI-101125	1125	volts	yes	My meter-1:Voltage,B-N	DEVICE-1/VOLTAGE_LN-C	AI-101126	1126	volts	yes	My meter-1:Voltage,C-N	DEVICE-1/VOLTAGE_NG	AI-101127	1127	volts	yes	My meter-1:Voltage, N-R	DEVICE-1/VOLTAGE_LN	AI-101128	1128	volts	yes	My meter-1:Voltage, L-N Avg	DEVICE-1/PWR_ELEC-A	AI-101140	-1140	kilowatts	yes	My meter-1:Real Power,A	DEVICE-1/PWR_ELEC-B	AI-101141	-1141	kilowatts	yes	My meter-1:Real Power,B	DEVICE-1/PWR_ELEC-C	AI-101142	-1142	kilowatts	yes	My meter-1:Real Power,C	DEVICE-1/PWR_ELEC	AI-101143	-1143	kilowatts	yes	My meter-1:Real Power,Tot	DEVICE-1/PWR_ELEC_REACT-A	AI-101144	-1144	kilovolt- amperes- reactive	yes	My meter-1:Reactive Power,A				kilovolt-		
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Statistics

This page provides Statistics and Error logs about the configured meters

The screenshot shows the web interface for B6130 - BACnet/IP to 2 ch. EasyMAP. On the left is a navigation menu with items: Home, BACnet/IP Settings, Devices Configuration, BACnet Objects Status, Change Password, Statistics, Reset Configuration, and Activate Configuration. The main content area is titled 'Statistics' and contains two tables. The first table lists various parameters and their values. The second table is an 'Error Log' showing a single entry for an unreachable IP/port.

Parameter	Value	Description
Count of Reboots	7	How many times the box has restarted
Last polling time	58 ms	Total time of the last polling for all Periodically polled devices.
Current Seconds	330	Time elapsed since power on.
FD Status	Disabled	BBMD address not configured
BACnet/IP Packets	2 sent, 0 received	
Modbus/RTU Packets	0 sent, 0 received	
Modbus/TCP Packets	54 sent, 54 received	

Error Log (Up to 40 last records, most recent first)					
Seconds	Stage	Device #	Starting Register	Message	
184	Meter access	2	241	Unreachable IP/Port	

Clear log

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Errors list:

- Unreachable IP/Port
- No response
- Refused connection
- Socket error
- Too small response
- Invalid CRC
- Unexpected response
- Invalid MBAP
- Modbus Error: Illegal Function
- Modbus Error: Illegal Address
- Modbus Error: Illegal data
- Modbus Error: Remote Device Failure
- Modbus Error: Unknown error
- Invalid data received (Byte Count)
- Invalid response
- No free socket
- No response from serial device
- Message Timeout
- Too large seial response

Reset Configuration

Clicking on Restore default will reset the entire device's configuration to factory defaults. Clicking on Discard changes will discard all changes and revert to active configuration.

B6130 - BACnet/IP to 2 ch. EasyMAP

- Home
- BACnet/IP Settings
- Devices Configuration
- BACnet Objects Status
- Change Password
- Statistics
- Reset Configuration
- Activate Configuration

Restore all settings to factory default

or

Discard all changes and revert to active configuration

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Change Password

A user can change the username and password on this screen.

B6130 - BACnet/IP to 2 ch. EasyMAP

- Home
- BACnet/IP Settings
- Devices Configuration
- BACnet Objects Status
- Change Password
- Statistics
- Reset Configuration
- Activate Configuration

Change Administrator Login and Password

Parameter	Value	Description
Login:	admin	Login to access this WebSetup (up to 15 symbols).
Current password:	<input type="text"/>	Current administrator password.
New password:	<input type="text"/>	New administrator password (up to 15 symbols).
Confirm new password:	<input type="text"/>	The same password.

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Activate Configuration

Once changes are made to any configuration on the B6130, the changes get saved only after clicking on the "Confirm" button in the Activate Configuration screen. Clicking on this will initiate a reboot of the device and will save the changes that have been made.

