

FieldServer ENOTE  
**Creating M-Bus Profiles for ProtoNodes**



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## fieldserver

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## 1 How to Edit an Existing Profile

- Download the file that needs editing by going into the browser address bar and entering the IP Address of the ProtoNode (default is 192.168.1.24) followed by the protocol specific name for the desired profile (see table below for listings). For example, enter XXX.XXX.X.X/prof11b.csv in the web browser for the BACnet/IP QS\_All\_Data\_Profile. The csv file will automatically be sent to the web browser's default download folder.

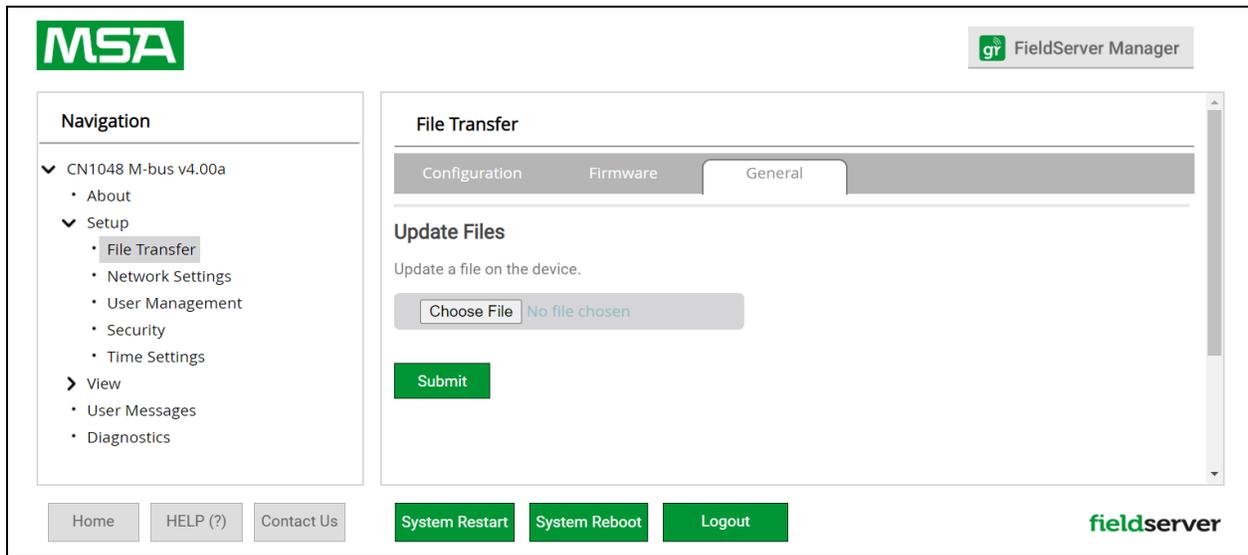
M-Bus Device	BACnet/IP	Modbus
Aquametro_Calec_ST	prof1b.csv	prof1r.csv
Comet_XRM-50	prof2b.csv	prof2r.csv
Elvaco_CMa20	prof3b.csv	prof3r.csv
EMU_3PH_Power_3-85	prof4b.csv	prof4r.csv
Kamstrup_601	prof5b.csv	prof5r.csv
Kamstrup_602	prof6b.csv	prof6r.csv
Sontay_Zenner_Multidata	prof7b.csv	prof7r.csv
Sontex_SuperCal_531	prof8b.csv	prof8r.csv
Siemens_WFH21	prof9b.csv	prof9r.csv
Siemens_FUE950_Energy	prof10b.csv	prof10r.csv
QS_All_Data_Profile	prof11b.csv	prof11r.csv
Kamstrup_66	prof12b.csv	prof12r.csv
Amtron_Sonic_D	prof13b.csv	prof13r.csv
Shenitech_STUF-280T	prof14b.csv	prof14r.csv
Sensus HRI-B1-8 Profile	prof15b.csv	prof15r.csv
Krom Schroder TRZ2 S1	prof16b.csv	prof16r.csv
Krom Schroder DE10R25-40B	prof17b.csv	prof17r.csv
Relay PadPuls M1	prof18b.csv	prof18r.csv
AILA_AUF200	prof19b.csv	prof19r.csv
Siemens_WFN21	prof20b.csv	prof20r.csv
Siemens_UH50	prof21b.csv	prof21r.csv
Siemens_T230	prof22b.csv	prof22r.csv
Kamstrup_Multical	prof23b.csv	prof23r.csv
Siemens_UH50_Combined	prof24b.csv	prof24r.csv
Sensostar_2C	prof25b.csv	prof25r.csv
Axis_SKU-03	prof26b.csv	prof26r.csv
ECS_Elec_Mtr	prof27b.csv	prof27r.csv
Diehl_Hydrus	prof28b.csv	prof28r.csv
Diehl_Sharky_775	prof29b.csv	prof29r.csv
Metz_T_M4	prof30b.csv	prof30r.csv
Hydrometer	prof31b.csv	prof31r.csv
Kamstrup_402	prof32b.csv	prof32r.csv

**NOTE:** Refer to the [M-Bus Protocol Driver Manual](#) for information on the configuration file.

- Open the profile using Excel or Notepad and complete the following actions:
  - Comment out points that are not need by adding “//” to the begging of each line
  - To add M-Bus points, copy a line that represents an existing M-Bus point then change the new line to reflect the new data point
  - Save the edited profile

**NOTE: When modifying the csv file using Excel, make sure to save the file in the csv format.**

- Back on the FS-GUI, click on the “General” Tab.
- Upload the edited profile to the ProtoNode and cycle power to the ProtoNode after the new profile is loaded successfully.



## 2 How to Create a New Profile

- Go to the Web Configurator page (landing page when the ProtoNode IP Address is entered into a browser) and install the new M-Bus device using the QS\_All\_Data\_Profile (found in the Section [How to Edit an Existing Profile](#) table) in the drop down list.

**NOTE:** Refer to the [M-Bus Protocol Driver Manual](#) for information on the configuration file.

- Let the ProtoNode run for at least 30 seconds, so that the ProtoNode has time to poll all the existing data points from the M-Bus device.
- Download the QS\_All\_Data\_Profile file for editing by going into the browser address bar and entering the IP Address of the ProtoNode (default is 192.168.1.24) followed by the protocol specific name for the QS\_All\_Data\_Profile (see the table in Section [How to Edit an Existing Profile](#) for listings). For example, enter XXX.XXX.X.X/prof11b.csv in the web browser for the BACnet/IP QS\_All\_Data\_Profile. The csv file will automatically be sent to the web browser's default download folder.
- Optimize the QS\_All\_Data\_Profile profile by taking the following actions:
  - View the data arrays as per the picture below to determine and note which M-bus data points are not present (have a value of zero)
  - Comment out points that are not needed by adding “//” to the begging of each line in the profile
- Save and rename accordingly the new profile file.
- Optionally, email the new profile to [SMC-Support@MSASafety.com](mailto:SMC-Support@MSASafety.com) for verification and inclusion for future orders.

The screenshot displays the MSA FieldServer Manager interface. On the left is a navigation menu with options like 'About', 'Setup', 'View', 'Connections', 'Data Arrays', 'Nodes', 'Map Descriptors', 'User Messages', and 'Diagnostics'. The 'Data Arrays' section is expanded, showing 'DA\_DIP\_S' selected. The main content area shows the configuration for 'DA\_DIP\_S' with a 'Data Array' tab. Below this is a table for 'Data Array Attrib' with columns 'Name' and 'Value'. The table contains the following data:

Name	Value
Data Array Name	DA_DIP_S
Data Format	UInt16
Length in Items	3
Bytes per Item	2
Data Age	1.636s

Below the table is a 'Display Format' dropdown menu set to 'UInt16'. At the bottom of the configuration area is another table for 'Data Array' with columns 'Offset' and values:

Offset	0	1	2
	0	1	1

At the bottom of the interface are buttons for 'Home', 'HELP (?)', 'Contact Us', 'Enable Data Editing', and 'Logout'. The 'fieldserver' logo is in the bottom right corner.

### 3 Example Walkthrough

Each type of meter will need one profile per **protocol mode** it supports.

Here are the steps to create a new profile for BACnet/IP:

1. Install and setup the new meter – This includes: setting the meter on the M-Bus bus; configuring the correct baud rate and primary address; and powering the meter on.
2. On the ProtoNode's Web Configurator page, click the Add button and enter the following information.
  - a. Node ID – Use the primary address
  - b. Profile – Select "All\_Data" profile  
*This profile is configured to be able to receive all the data of any M-Bus meter, and more.*
3. Click the Diagnostic & Debugging button (located on the bottom right corner of the page).
4. On the FS-GUI page, Click **View** and then **Map Descriptors** in the navigation tree.
  - a. Let the communication between the ProtoNode and the meter run for at least 30 seconds
  - b. Take a note of all the table entries where RX MSG is greater than zero  
*These are the "live" M-Bus points in the meter. All the other entries are not used by the meter. They need to be eliminated.*
5. Download the general meter "ALL data" profile CSV file and perform the following edits. (See the [M-Bus Protocol Driver Manual](#) for edit examples).
  - a. Use the FieldServer Toolbox and take a 1 second capture
  - b. Unzip the file
  - c. Identify the **protocol1.csv** file (M-Bus to BACnet/IP)  
*Each protocol mode has a **profileX.csv** file. This contains pointers to the meter profiles, listed around line 55.*
  - d. Add the new meter name, using a naming convention similar to the existing names
  - e. Add a new **Profile\_filename** where for the new profile  
*Use the following naming convention: prof[index]b.csv*
  - f. Find the "ALL data" profile  
*It is usually called **QS\_All\_Data\_Profile** and found in file **prof11b.csv**.*
  - g. Open the "ALL data" file with a preferred text editor  
**NOTE: Use real text editors only, not Excel.**
  - h. Delete unwanted data points, and keep only the "live" data points found in step 4.b  
*Do this in both the **client** and the **server** section of the file.*
  - i. Save the edited file with a new name (same name used in step 5.e)
6. Upload the new profile back onto the ProtoNode.
  - a. From the FS-GUI page, click **Setup, File Transfer** and then **General** tab in the navigation tree
  - b. Upload the newly edited **protocol1.csv** and **profXXb.csv**
7. Reboot the ProtoNode.