



Where Automation Connects.



MVI56E-AFC

Firmware Upgrade Procedure

July 7, 2025

TECHNICAL NOTE

Your Feedback Please

We always want you to feel that you made the right decision to use our products. If you have suggestions, comments, compliments or complaints about our products, documentation, or support, please write or call us.

ProSoft Technology, Inc.

+1 (661) 716-5100

+1 (661) 716-5101 (Fax)

www.prosoft-technology.com

ps.support@belden.com

MVI56E-AFC Firmware Upgrade Procedure Technical Note
For Public Use.

July 7, 2025

ProSoft Technology®, is a registered copyright of ProSoft Technology, Inc. All other brand or product names are or may be trademarks of, and are used to identify products and services of, their respective owners.

Content Disclaimer

This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation, and testing of the products with respect to the relevant specific application or use thereof. Neither ProSoft Technology nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. Information in this document including illustrations, specifications and dimensions may contain technical inaccuracies or typographical errors. ProSoft Technology makes no warranty or representation as to its accuracy and assumes no liability for and reserves the right to correct such inaccuracies or errors at any time without notice. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

No part of this document may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without express written permission of ProSoft Technology. All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components. When devices are used for applications with technical safety requirements, the relevant instructions must be followed. Failure to use ProSoft Technology software or approved software with our hardware products may result in injury, harm, or improper operating results. Failure to observe this information can result in injury or equipment damage.

© 2025 ProSoft Technology. All Rights Reserved.



For professional users in the European Union

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.



Prop 65 Warning – Cancer and Reproductive Harm – www.P65Warnings.ca.gov

Agency Approvals and Certifications

Please visit our website: www.prosoft-technology.com

Table of Contents

1	Introduction	4
1.1	Support	4
2	Installation	5
2.1	Upgrading to Base Image v1.01 #10.....	5
2.2	Upgrading to Application Image v4.05.002 #23	10
2.3	Upgrading to Base Image v1.03.....	13
2.4	Upgrading to Application Image v4.06.001 #57	16
2.5	EAFC Manager.....	19
3	Support, Service, and Warranty	25
3.1	Contacting Technical Support	25
3.2	Warranty Information.....	25

1 Introduction

This document assists the user with the upgrade process of the MVI56E-AFC firmware v4.01.00 to v4.06.01.

1.1 Support

Technical support will be provided via the Web (in the form of user manuals, FAQ, datasheets etc.) to assist with installation, operation, and diagnostics.

For additional support the user can use either of the following:

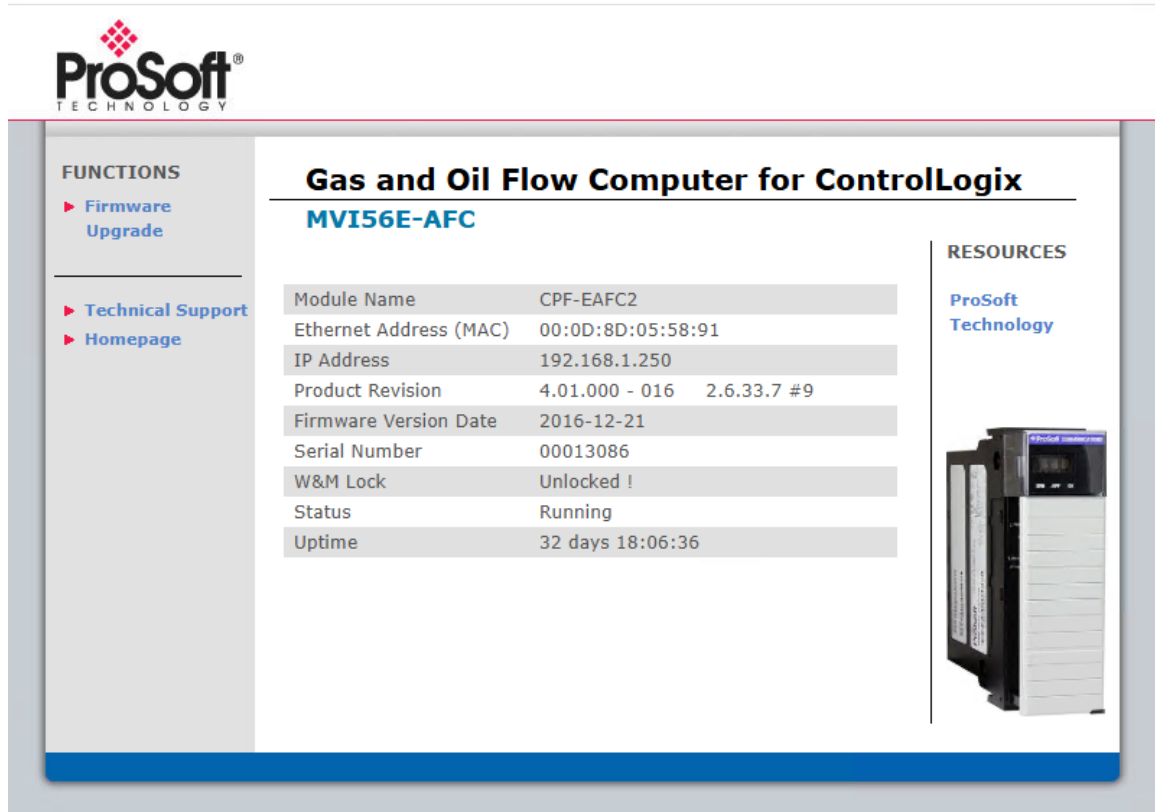
Resource	Link
Contact Us web link	www.prosoft-technology.com
Support email	www.prosoft-technology.com

2 Installation

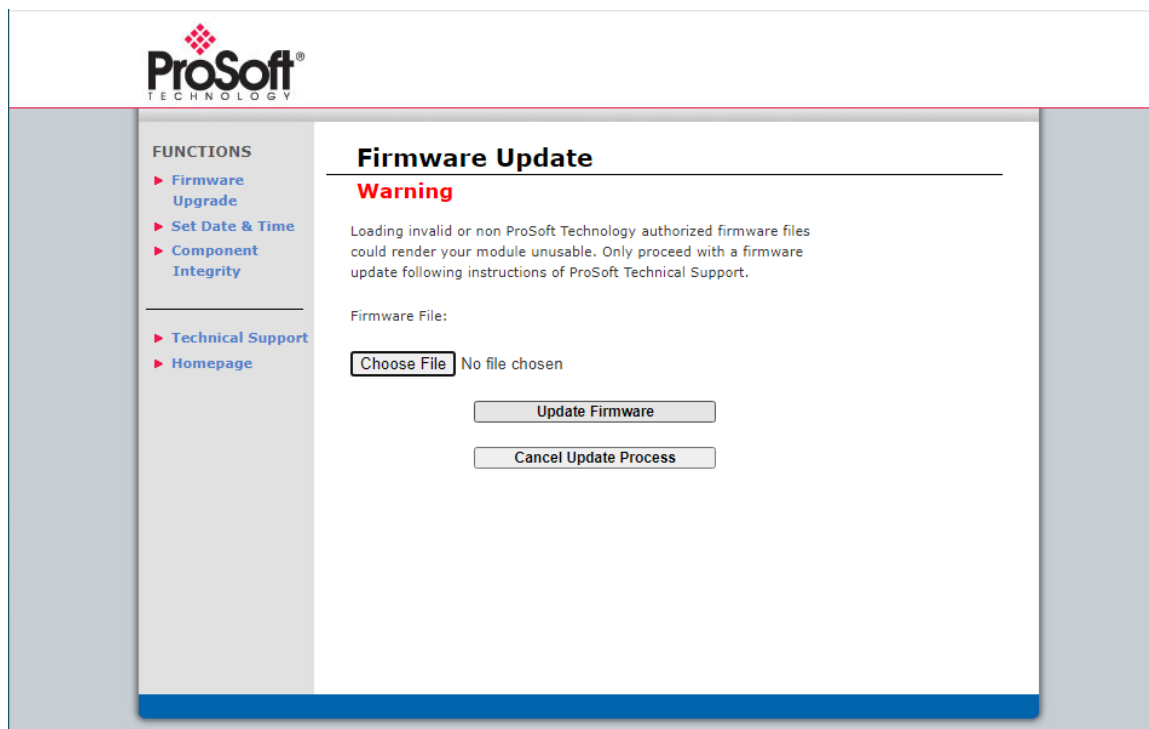
To upgrade the MVI56E-AFC firmware from v4.01.00 to v4.06.01, there are a series of firmware upgrades to perform. The procedures are outlined in the following sections and must be completed in sequential order.

2.1 Upgrading to Base Image v1.01 #10

- 1 Connect to the MVI56E-AFC local user interface. For more information about connecting to the local user interface, please see the *MVIxxE-AFC Setup and Configuration Guide* at www.prosoft-technology.com
- 2 In the local user interface, click on the **FIRMWARE UPGRADE** option.



- 3 In the *Firmware Update* dialog, click the **CHOOSE FILE** button.



Note: If the Kernel is **v2.6.33.7 #6** and the Base Image is **v1.00 #003**, the Base Image will need to be upgraded to **v1.01 #010**. Please review the following table:

Application Firmware Image		Base Firmware Image		OS Kernel Version
4.06.001 #057	19-Aug-2022	1.03 #012	07-Oct-2022	2.6.33.7 #9
4.06.001 #056	30-Jun-2022	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.06.000 #044	07-Mar-2022	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.05.002 #023	31-Mar-2021	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.05.001 #022	25-Feb-2020	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.05.000 #021	24-Sep-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.002 #017	30-May-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.001 #014	12-Feb-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.000 #012	12-Sep-2018	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.03.000 #020	01-Mar-2018	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.02.000 #010	04-Oct-2017	1.00 #003	15-Feb-2015	2.6.33.7 #6
4.01.000 #016	21-Dec-2016	1.00 #003	15-Feb-2015	2.6.33.7 #6
4.00.000 #034	19-Apr-2016	1.00 #003	15-Feb-2015	2.6.33.7 #6

Compatibility

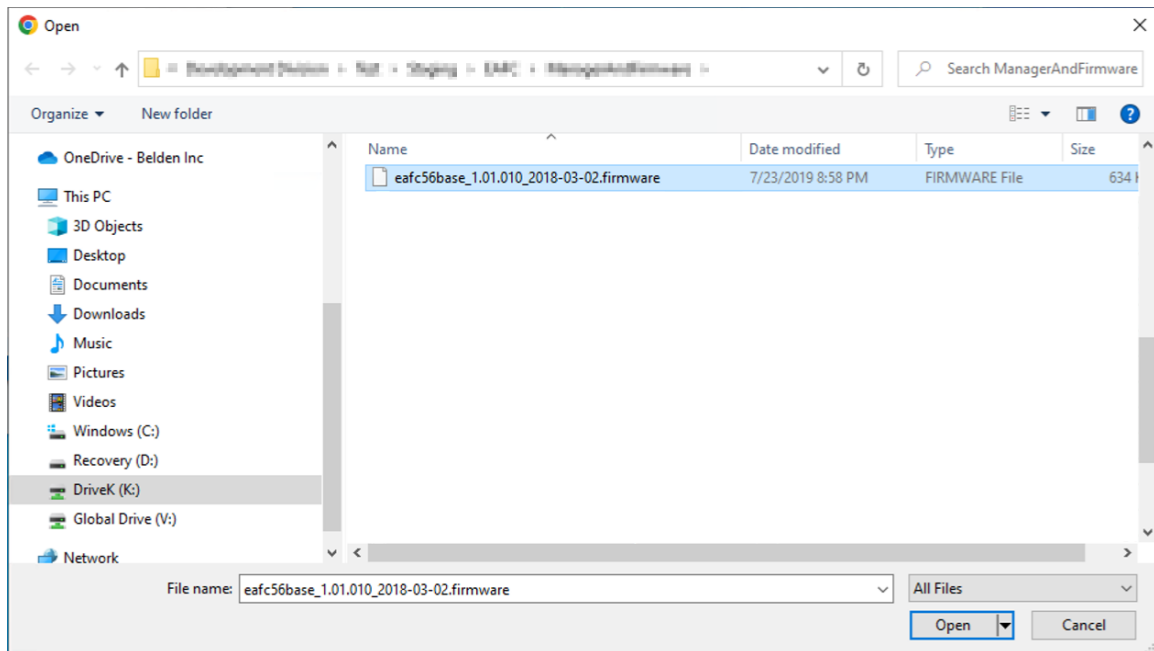
The following table shows the base firmware and operating system kernel versions that are compatible with each application firmware version.

Application Firmware Image		Base Firmware Image		OS Kernel Version
4.06.001 #057	19-Aug-2022	1.03 #012	07-Oct-2022	2.6.33.7 #9
4.06.001 #056	30-Jun-2022	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.06.000 #044	07-Mar-2022	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.05.002 #023	31-Mar-2021	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.05.001 #022	25-Feb-2020	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.05.000 #021	24-Sep-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.002 #017	30-May-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.001 #014	12-Feb-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.000 #012	12-Sep-2018	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.03.000 #020	01-Mar-2018	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.02.000 #010	04-Oct-2017	1.00 #003	15-Feb-2015	2.6.33.7 #6
4.01.000 #016	21-Dec-2016	1.00 #003	15-Feb-2015	2.6.33.7 #6
4.00.000 #034	19-Apr-2016	1.00 #003	15-Feb-2015	2.6.33.7 #6

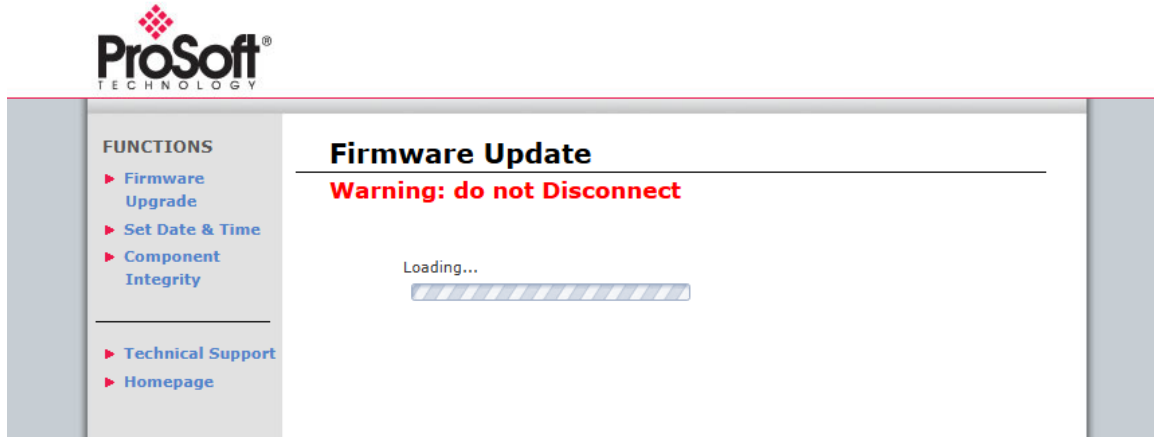
Kernel v2.6.33.7 #9 is installed along with **Base Image v1.01 #10** as a package, but the **Application Firmware Image** can still be downgraded to **v4.00, v4.01 or v4.02**. However, **Application Images** from **v4.03** and above require **Base Image v1.01 #10** that installs **Kernel v2.6.33.7 #9** automatically.

4.04.001 #014	12-Feb-2019	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.04.000 #012	12-Sep-2018	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.03.000 #020	01-Mar-2018	1.01 #010	02-Mar-2018	2.6.33.7 #9
4.02.000 #010	04-Oct-2017	1.00 #003	15-Feb-2015	2.6.33.7 #6
4.01.000 #016	21-Dec-2016	1.00 #003	15-Feb-2015	2.6.33.7 #6
4.00.000 #034	19-Apr-2016	1.00 #003	15-Feb-2015	2.6.33.7 #6

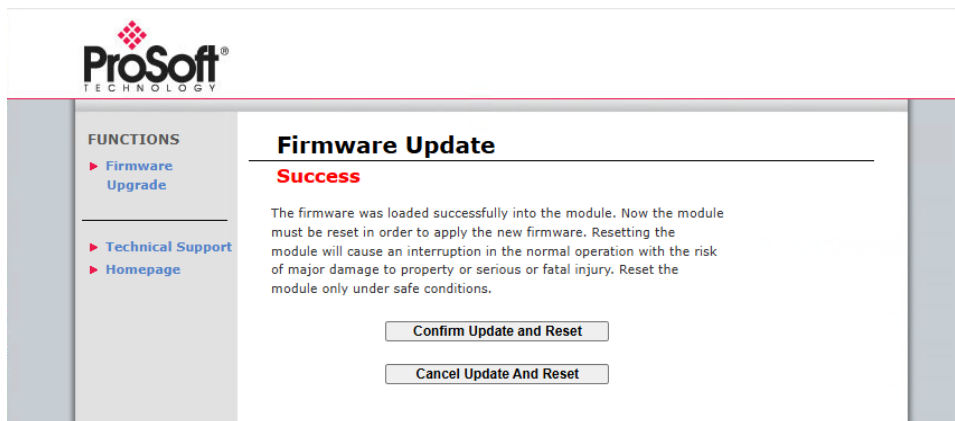
- 4 Select the **Base Image v1.01.010 firmware** file and then click the **OPEN** button.



- 5 The "Loading..." dialog displays and successfully completes.



- 6 After the firmware file has been successfully uploaded, click on the **CONFIRM UPDATE AND RESET** button.

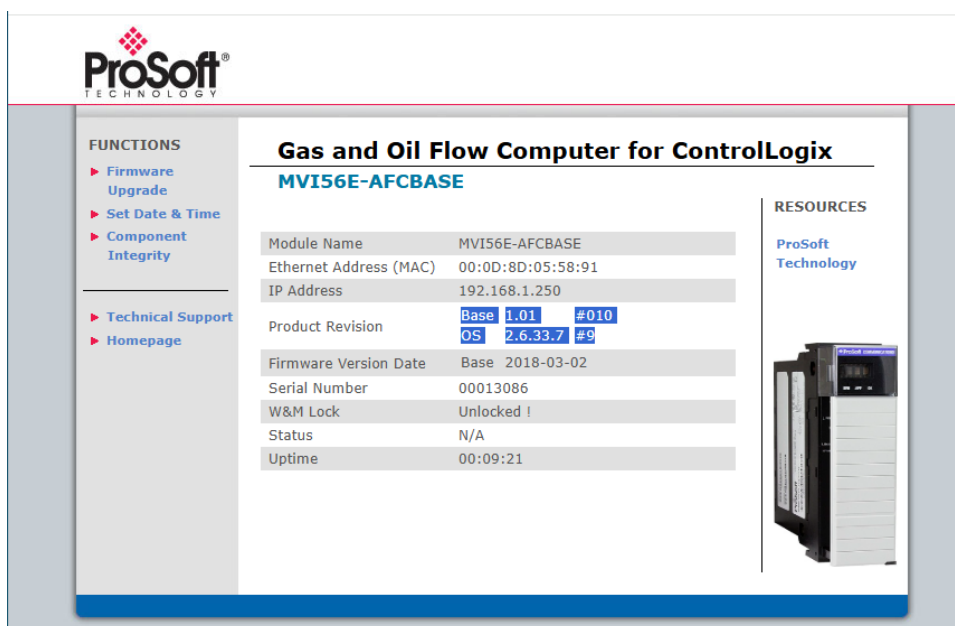


- 7 Ping the IP address to confirm the MVI56E-AFC is accessible.

```
Pinging 192.168.1.250 with 32 bytes of data:
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64

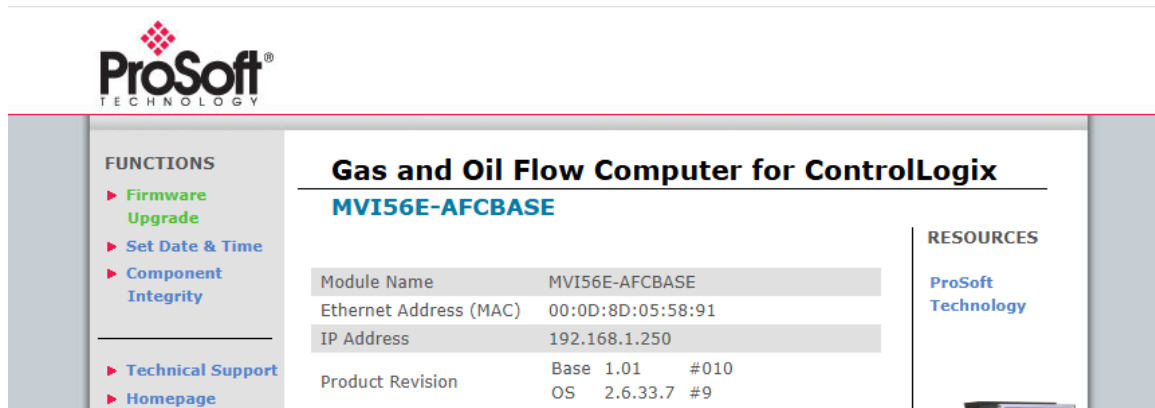
Ping statistics for 192.168.1.250:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- 8 Access the local user interface and confirm the Base Image and Kernel are correctly displayed.

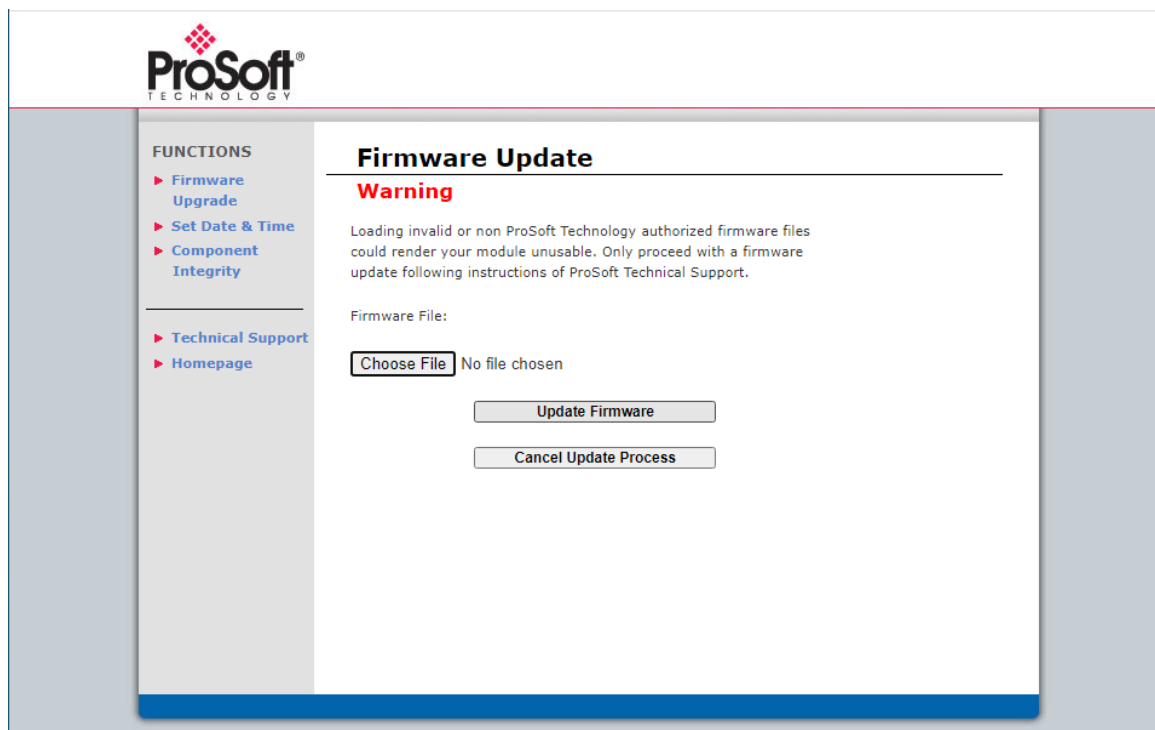


2.2 Upgrading to Application Image v4.05.002 #23

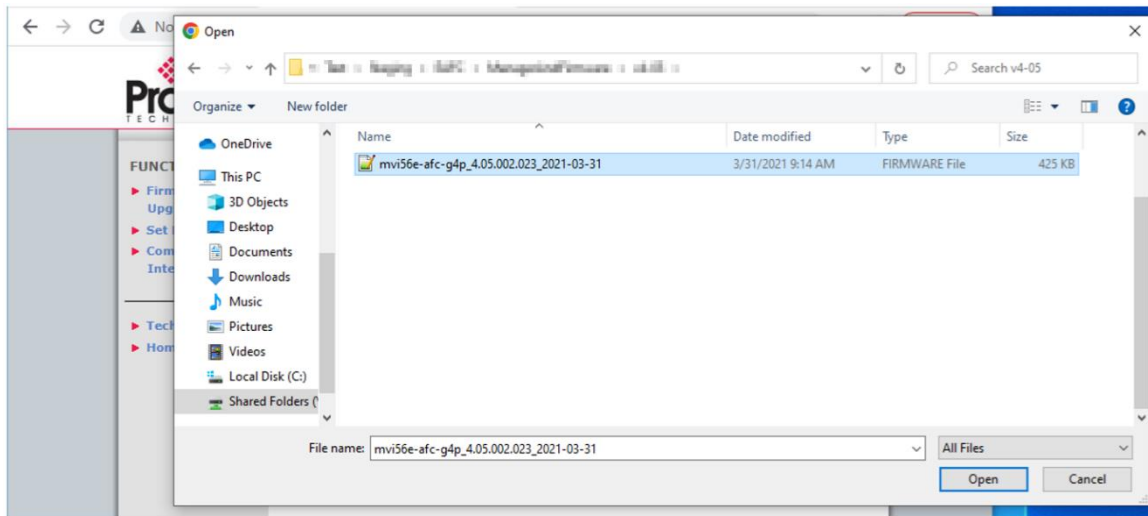
- 1 In the local user interface, click on the **FIRMWARE UPGRADE** option.



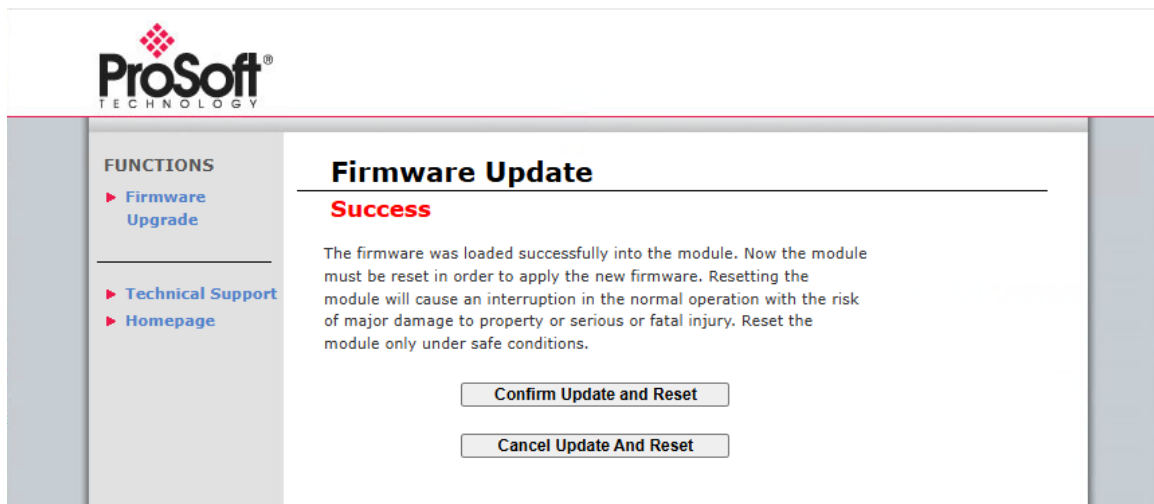
- 2 In the *Firmware Update* dialog, click the **CHOOSE FILE** button.



- 3 Select the **Application Image 4.05.02** firmware file and then click the **OPEN** button.



- 4 After the firmware file has been successfully uploaded, click on the **CONFIRM UPDATE AND RESET** button.

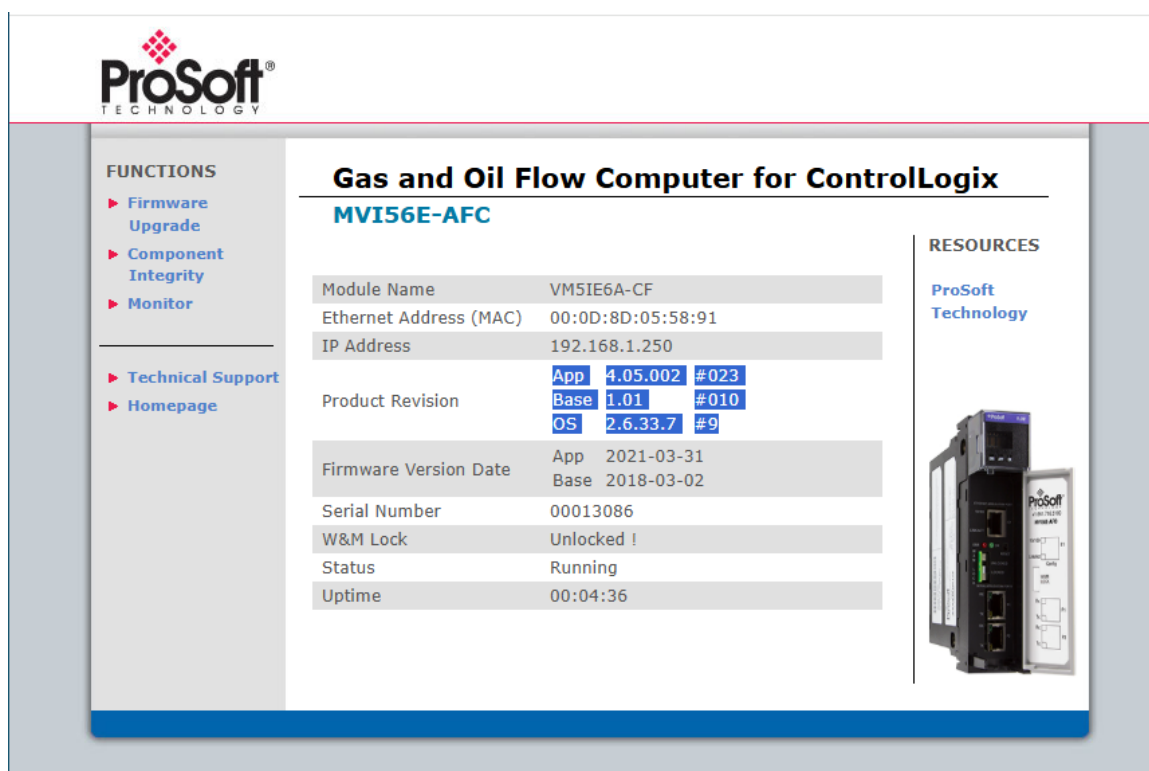


- 5 Ping the IP address to confirm the MVI56E-AFC is accessible.

```
Pinging 192.168.1.250 with 32 bytes of data:
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.250:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- 6 Connect to the local user interface with the set IP address **192.168.1.250** to confirm the Application (*App*) v4.05.02 and Base (*Base*) v1.01 versions are correct.



The screenshot displays the ProSoft Technology web interface for the MVI56E-AFC device. The interface is divided into several sections:

- FUNCTIONS:**
 - Firmware Upgrade
 - Component Integrity
 - Monitor
 - Technical Support
 - Homepage
- Gas and Oil Flow Computer for ControlLogix MVI56E-AFC**

Module Name	VM5IE6A-CF		
Ethernet Address (MAC)	00:0D:8D:05:58:91		
IP Address	192.168.1.250		
Product Revision	App	4.05.002	#023
	Base	1.01	#010
	OS	2.6.33.7	#9
Firmware Version Date	App	2021-03-31	
	Base	2018-03-02	
Serial Number	00013086		
W&M Lock	Unlocked !		
Status	Running		
Uptime	00:04:36		
- RESOURCES:**
 - ProSoft Technology

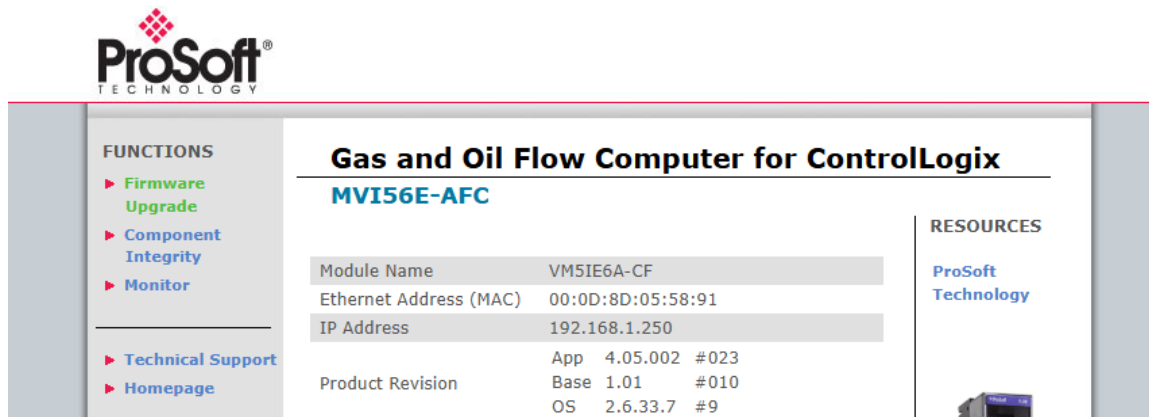
An image of the MVI56E-AFC device is shown on the right side of the interface.

2.3 Upgrading to Base Image v1.03

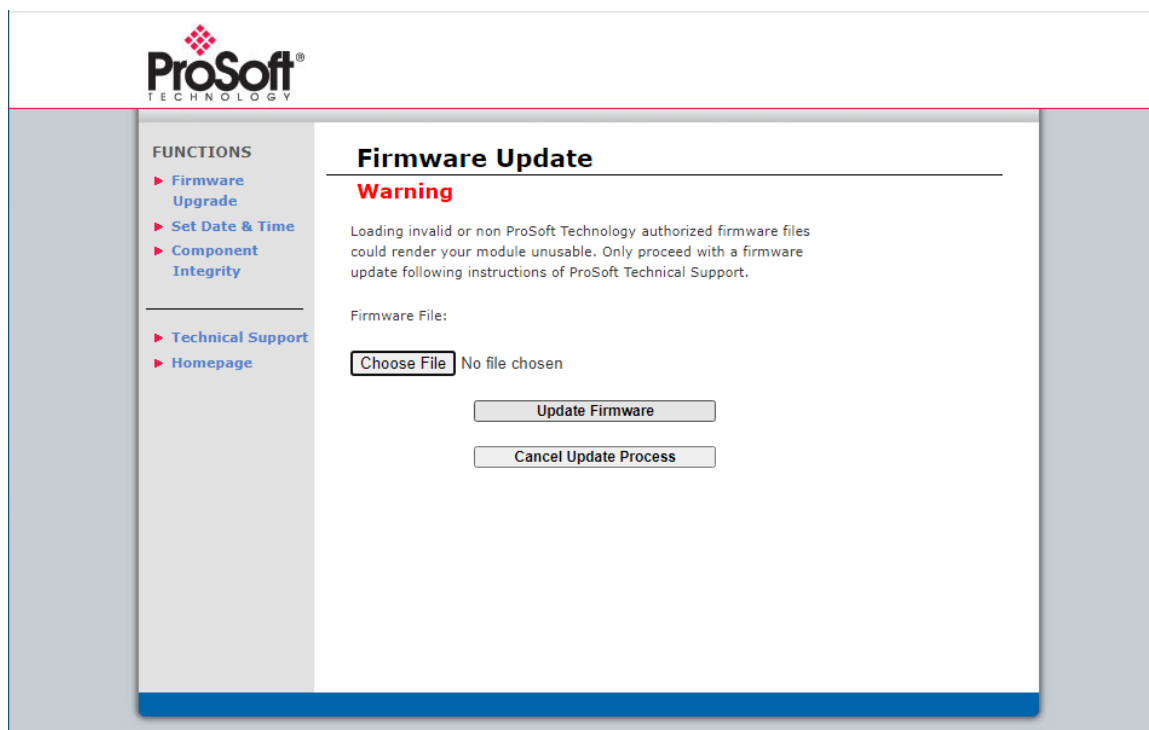
This section covers a second base image upgrade to v1.03.

Warning: There is a possibility of rendering the MVI56E-AFC non-functional at the end of this procedure. This is dependent on the age of the module. Find out if the module is still under warranty. If it is not under warranty, conduct this step at your own risk. Please consult with Technical Support for additional details.

- 1 In the local user interface, click on the **FIRMWARE UPGRADE** option.

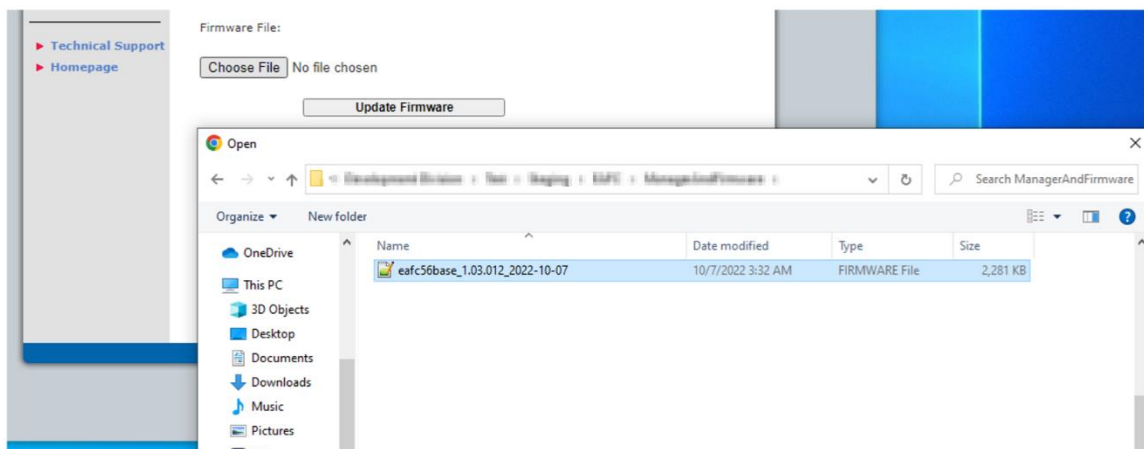


- 2 In the *Firmware Update* dialog, click the **CHOOSE FILE** button.

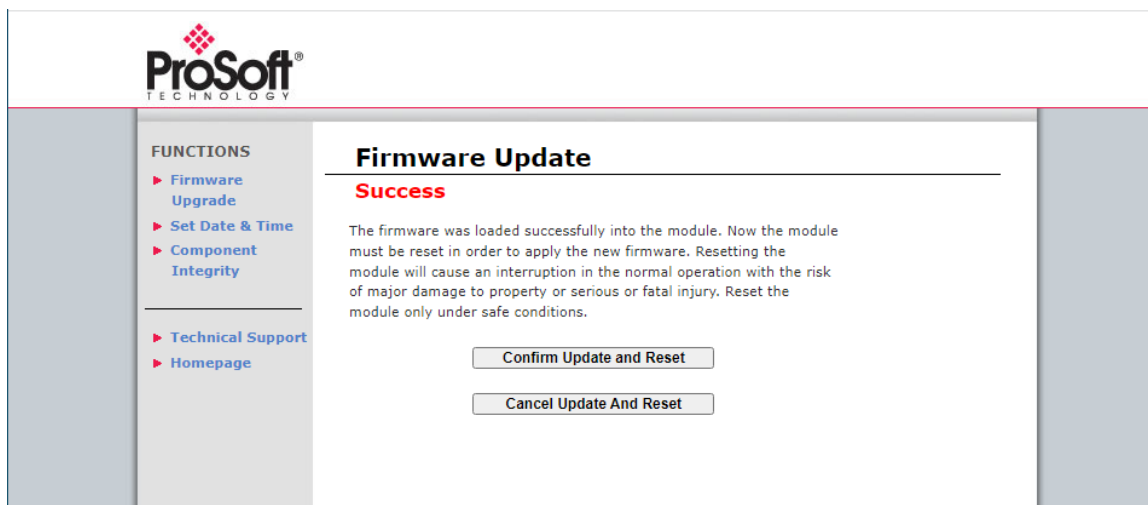


- 3 Select the **Base Image v1.03** firmware file and then click the **OPEN** button.

Warning: There is a possibility of rendering the MVI56E-AFC non-functional at the end of this step. This is dependent on the age of the module. Find out if the module is still under warranty. If it is not under warranty, conduct this step at your own risk. Please consult with Technical Support for additional details.



- 4 After the firmware file has been successfully uploaded, click on the **CONFIRM UPDATE AND RESET** button.



5 Ping the IP address to confirm the MVI56E-AFC is accessible.

```
Pinging 192.168.1.250 with 32 bytes of data:
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.250:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

6 In the local user interface, confirm the *Base Image v1.03* is installed.

ProSoft TECHNOLOGY

FUNCTIONS

- ▶ Firmware Upgrade
- ▶ Set Date & Time
- ▶ Component Integrity
- ▶ Technical Support
- ▶ Homepage

Gas and Oil Flow Computer for ControlLogix
MVI56E-AFCBASE

Module Name	MVI56E-AFCBASE
Ethernet Address (MAC)	00:0D:8D:05:58:91
IP Address	192.168.1.250
Product Revision	Base 1.03 #012 OS 2.6.33.7 #9
Firmware Version Date	Base 2022-10-07
Serial Number	00013086
W&M Lock	Unlocked !
Status	N/A
Uptime	00:01:47

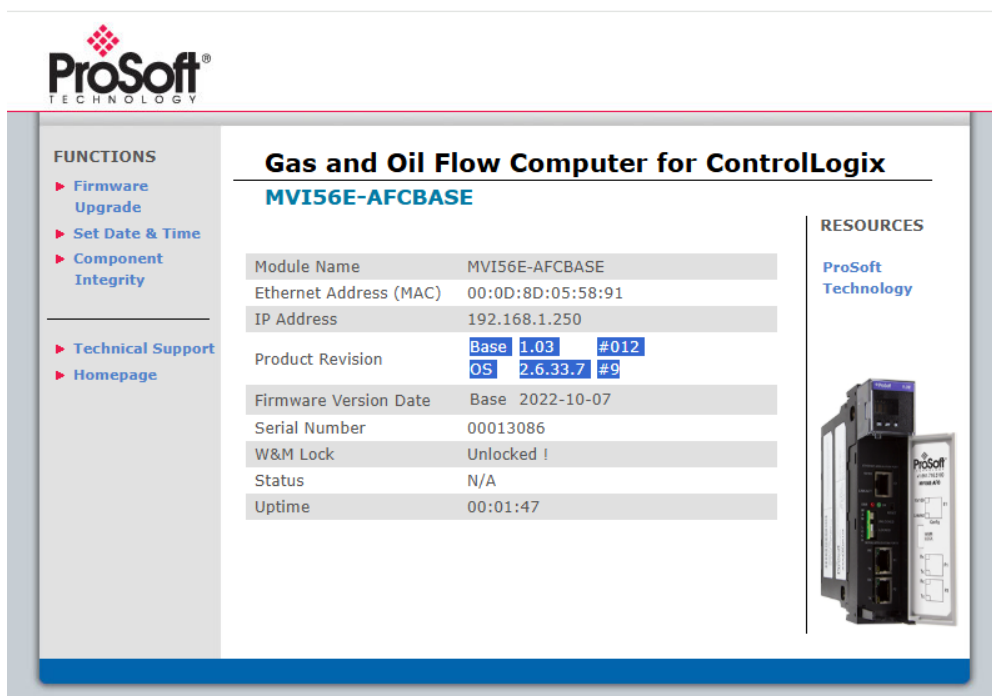
RESOURCES

[ProSoft Technology](#)

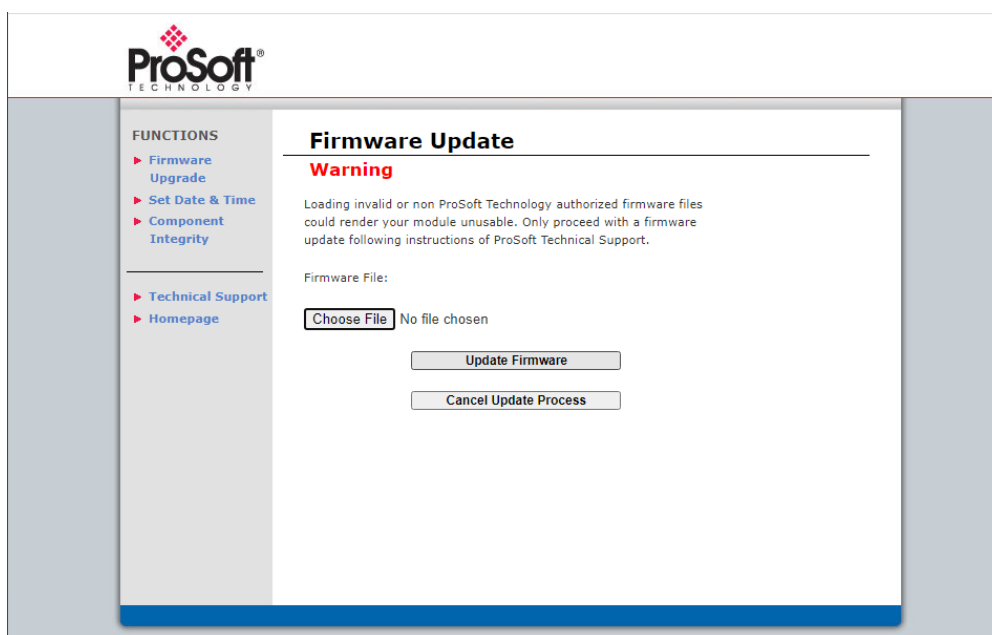
2.4 Upgrading to Application Image v4.06.001 #57

This section covers an application image upgrade to v4.06.001 #57.

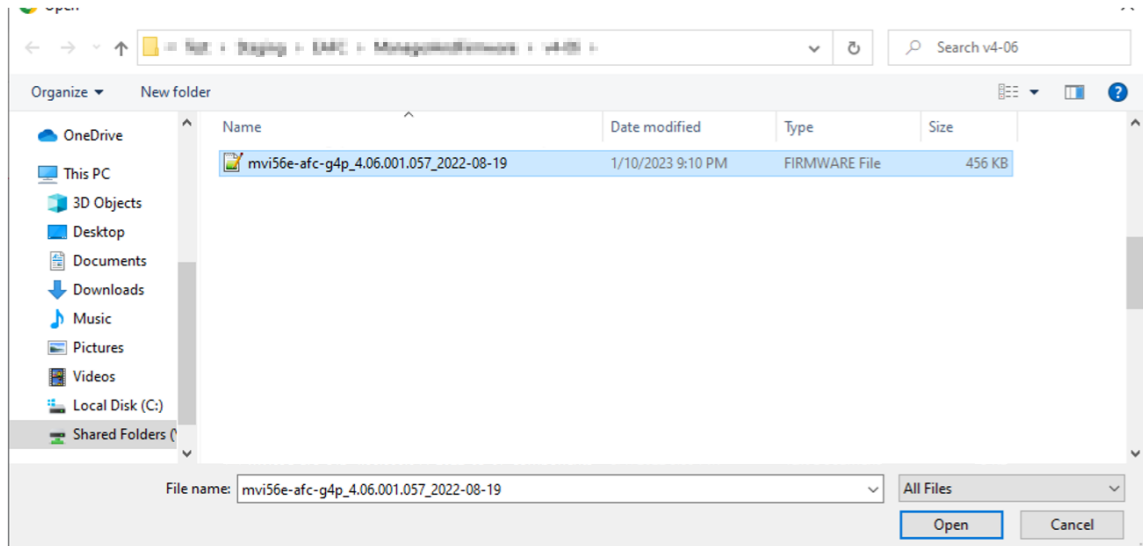
- 1 In the local user interface, click on the **FIRMWARE UPGRADE** option.



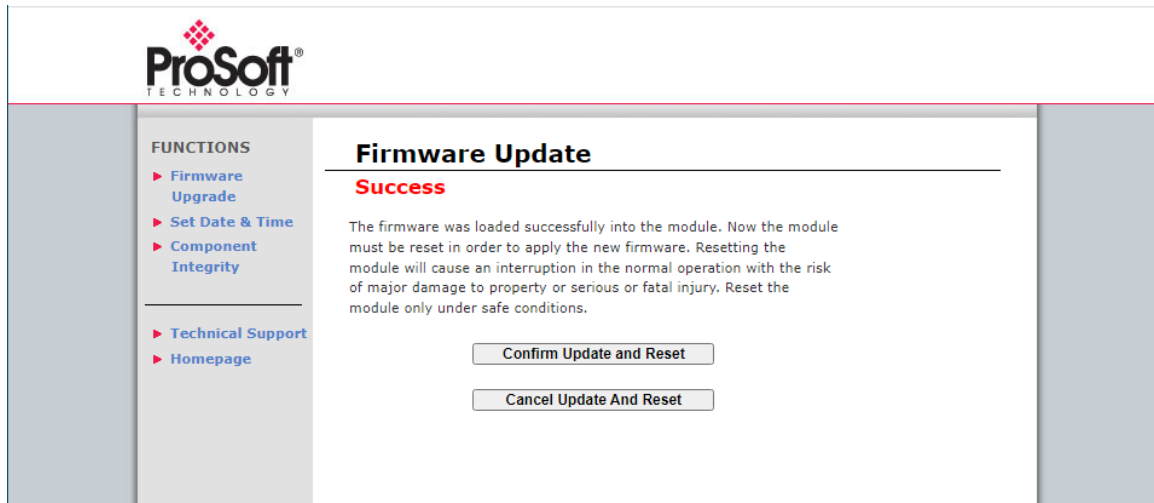
- 2 In the *Firmware Update* dialog, click the **CHOOSE FILE** button.



- 3 Select the **Application Image v4.06.001** firmware file and then click the **OPEN** button.



- 4 After the firmware file has been successfully uploaded, click on the **CONFIRM UPDATE AND RESET** button.

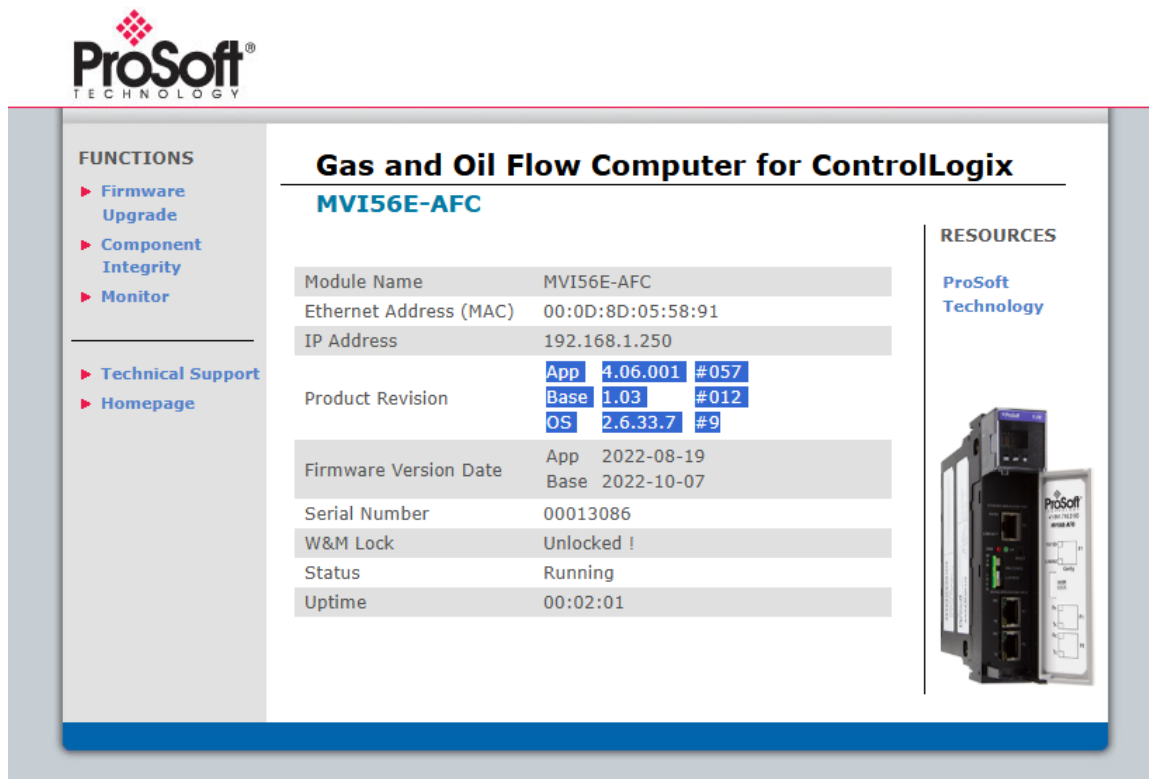


- 5 Ping the IP address to confirm the MVI56E-AFC is accessible.

```
Pinging 192.168.1.250 with 32 bytes of data:
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64
Reply from 192.168.1.250: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.250:
    Packets: Sent = 8, Received = 8, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- 6 In the local user interface, confirm the Application (*App*) Image v4.06.001 is installed.



Note: Downgrading the application image performs an application cold start / reset to factory defaults. Changing the application image removes the application image. Remove if the module does not correctly operate, and downgrade to the last working application image.

If the module is not reachable with the previously set IP address, the default factory IP address is **192.168.0.251** (Server), and **192.168.0.250** (WebApp).

```
C:\Users\Sysadmin>ping 192.168.0.250

Pinging 192.168.0.250 with 32 bytes of data:
Reply from 10.12.115.1: TTL expired in transit.
Reply from 192.168.0.250: bytes=32 time=1ms TTL=64
Reply from 192.168.0.250: bytes=32 time=1ms TTL=64
Reply from 192.168.0.250: bytes=32 time=1ms TTL=64

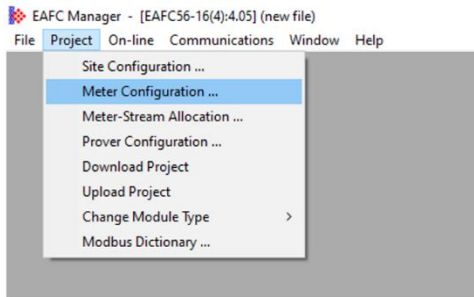
Ping statistics for 192.168.0.250:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\Sysadmin>
```

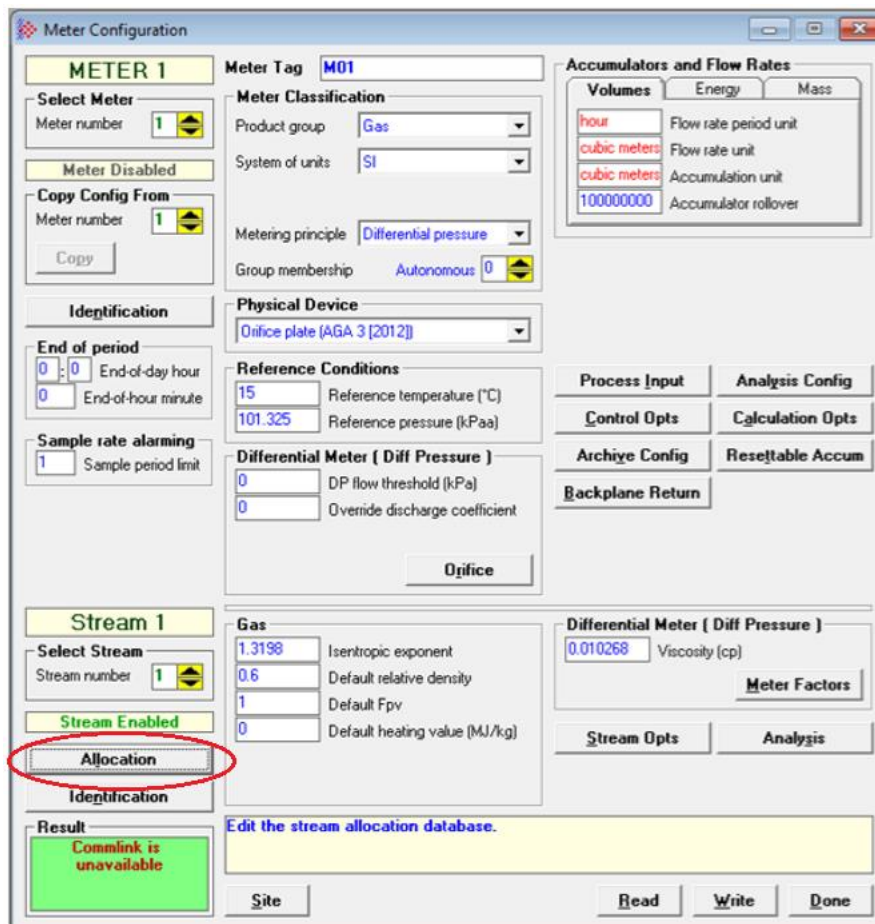
2.5 EAFC Manager

This section describes the *Meter Stream Allocation* changes for each meter in the EAFC Manager software.

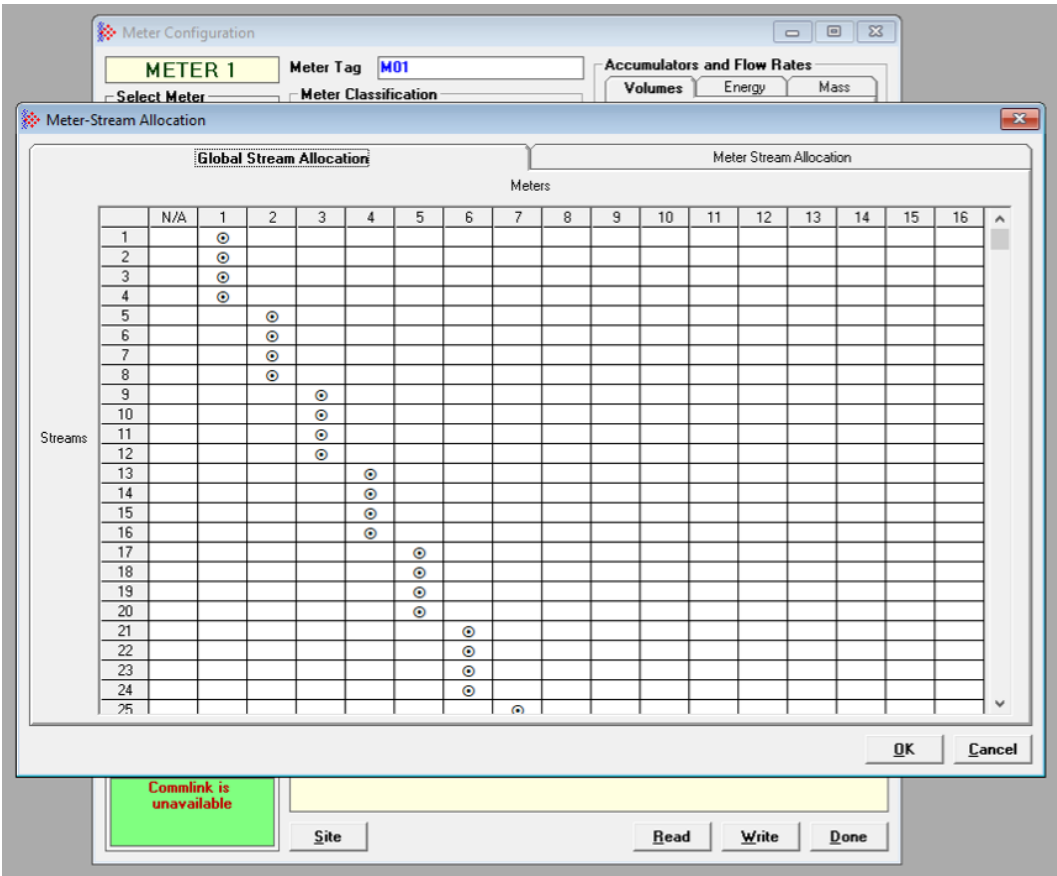
- 1 Click on **PROJECT > METER CONFIGURATION...**



- 2 In the *Meter Configuration* dialog, click on the **ALLOCATION** button.



- 3 The *Meter-Stream Allocation* dialog contains the current allocation structure of the Global and Meter streams.



- 4 Conduct the same upgrade steps from section 2.2 through 2.4, for the AFC file.
The Stream Allocation structure changes after **v4.06.001** EAFC Manager.

Meter Configuration

METER 1 Meter Tag **M01**

Select Meter
Meter number **1**

Meter Disabled

Copy Config From
Meter number **1**

Meter Classification
Product group **Gas**
System of units **SI**
Metering principle **Differential pressure**

Accumulators and Flow Rates

Volumes	Energy	Mass
hour	Flow rate period unit	
cubic meters	Flow rate unit	
cubic meters	Accumulation unit	
100000000	Accumulator rollover	

Meter-Stream Allocation

Global Stream Allocation

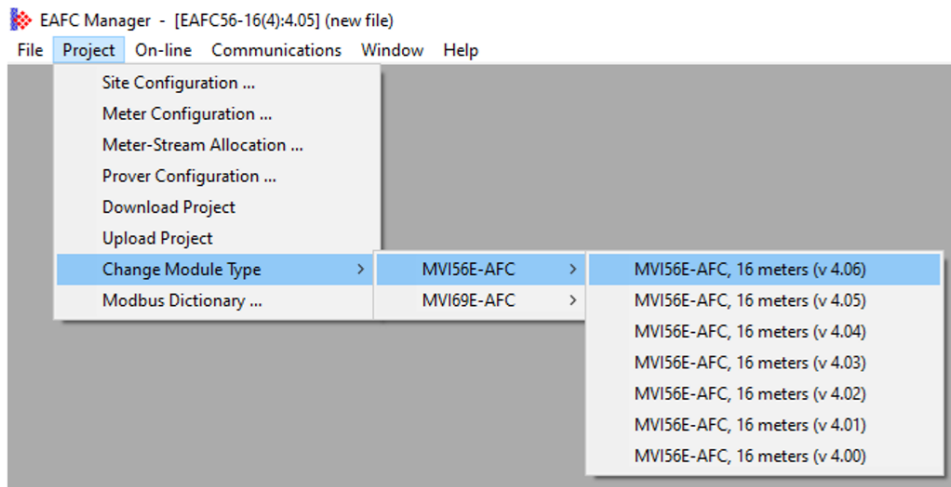
Meter-Streams

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	3	4												
2	5	6	7	8												
3	9	10	11	12												
4	13	14	15	16												
5	17	18	19	20												
6	21	22	23	24												
7	25	26	27	28												
8	29	30	31	32												
9	33	34	35	36												
10	37	38	39	40												
11	41	42	43	44												
12	45	46	47	48												
13	49	50	51	52												
14	53	54	55	56												
15	57	58	59	60												
16	61	62	63	64												

Shift Left Shift Right

OK Cancel

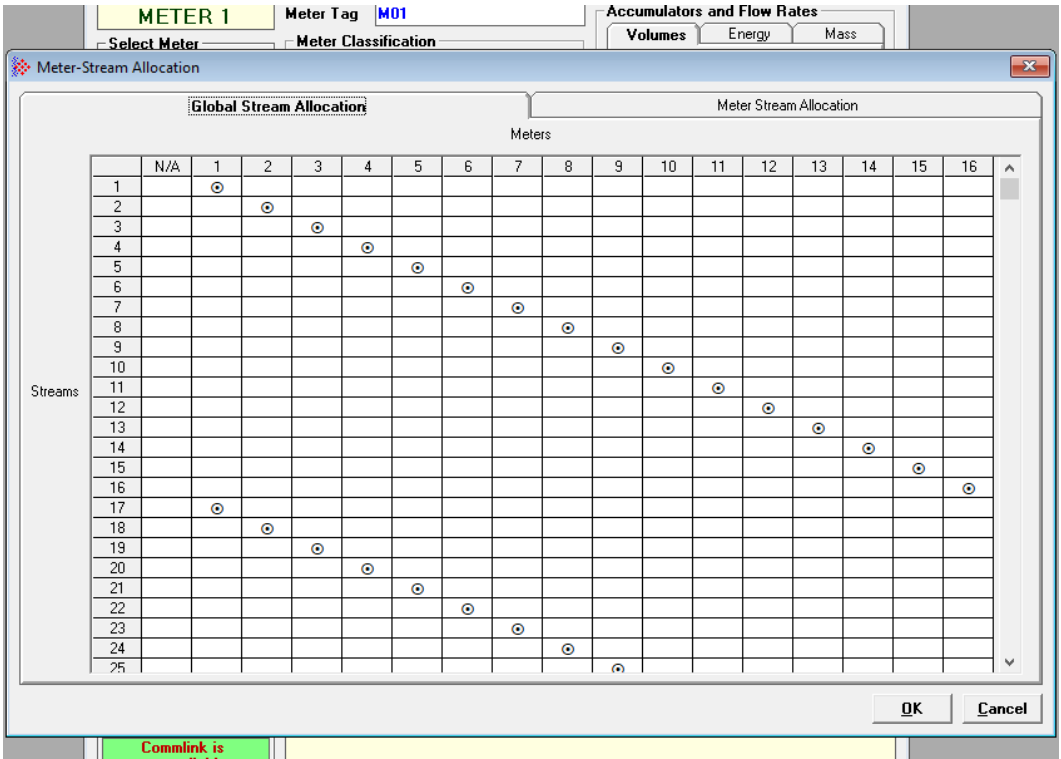
- 5 Upgrade Stream Allocation to v4.06 by clicking **PROJECT > CHANGE MODULE TYPE > MVIxx-AFC > MVIxxE-AFC, 16 METERS (v 4.06)**.



- 6 After the upgrade is complete, click on the **ALLOCATION** button in the Meter Configuration dialog.



7 The *Global Stream Allocation* tab has been updated.



- 8 Click on the *Meter Stream Allocation* tab to verify the updates.

The screenshot shows two overlapping windows from a software interface. The top window is titled "Meter Configuration" and contains settings for "METER 1". The bottom window is titled "Meter-Stream Allocation" and displays a table for stream allocation.

Meter Configuration Window:

- METER 1** (Title)
- Meter Tag:** M01
- Select Meter:** Meter number 1 (with a dropdown arrow)
- Meter Disabled:** (checkbox)
- Copy Config From:** Meter number 1 (with a dropdown arrow)
- Meter Classification:**
 - Product group: Gas
 - System of units: SI
 - Metering principle: Differential pressure
- Accumulators and Flow Rates:**
 - Volumes:**
 - hour (Flow rate period unit)
 - cubic meters (Flow rate unit)
 - cubic meters (Accumulation unit)
 - 100000000 (Accumulator rollover)
 - Energy:**
 - Mass:**

Meter-Stream Allocation Window:

The window has two tabs: "Global Stream Allocation" and "Meter Stream Allocation". The "Meter Stream Allocation" tab is active, showing a table with 16 columns (labeled 1 to 16) and 16 rows (labeled 1 to 16). The table is titled "Meter-Streams".

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	17	33	49												
2	2	18	34	50												
3	3	19	35	51												
4	4	20	36	52												
5	5	21	37	53												
6	6	22	38	54												
7	7	23	39	55												
8	8	24	40	56												
9	9	25	41	57												
10	10	26	42	58												
11	11	27	43	59												
12	12	28	44	60												
13	13	29	45	61												
14	14	30	46	62												
15	15	31	47	63												
16	16	32	48	64												

Buttons at the bottom of the "Meter-Stream Allocation" window: Shift Left, Shift Right, OK, Cancel.

3 Support, Service, and Warranty

3.1 Contacting Technical Support

ProSoft Technology, Inc. is committed to providing the most efficient and effective support possible. Before calling, please gather the following information to assist in expediting this process:

- 1 Product Version Number
- 2 System architecture
- 3 Network details

If the issue is hardware related, we will also need information regarding:

- 1 Module configuration and associated ladder files, if any
- 2 Module operation and any unusual behavior
- 3 Configuration/Debug status information
- 4 LED patterns
- 5 Details about the interfaced serial, Ethernet or Fieldbus devices

North America (Corporate Location)	Europe / Middle East / Africa Regional Office
Phone: +1 661-716-5100 ps.prosofttechnology@belden.com Languages spoken: English, Spanish REGIONAL TECH SUPPORT ps.support@belden.com	Phone: +33.(0)5.34.36.87.20 ps.europe@belden.com Languages spoken: English, French, Hindi, Italian REGIONAL TECH SUPPORT ps.support.emea@belden.com
Latin America Regional Office	Asia Pacific Regional Office
Phone: +52.222.264.1814 ps.latinam@belden.com Languages spoken: English, Spanish, Portuguese REGIONAL TECH SUPPORT ps.support.la@belden.com	Phone: +60.3.2247.1898 ps.asiapc@belden.com Languages spoken: Bahasa, Chinese, English, Hindi, Japanese, Korean, Malay REGIONAL TECH SUPPORT ps.support.ap@belden.com

For additional ProSoft Technology contacts in your area, please visit:
www.prosoft-technology.com/About-Us/Contact-Us

3.2 Warranty Information

For complete details regarding ProSoft Technology's legal terms and conditions, please see:
www.prosoft-technology.com/ProSoft-Technology-Legal-Terms-and-Conditions

For Return Material Authorization information, please see:
www.prosoft-technology.com/RMA