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DRESSER Wayne

Fusion Support
Version 1.09
11/09/2010

TECHNICAL

Contents

1 Introduction

1.1 Purpose

This document summarizes information helpful in the support of the Dresser Wayne Fusion product line.
The latest version of this document can be found at http://dl.dropbox.com/u/159086/Fusion/Fusion%20Support.pdf.

1.2 Definitions and Acronyms

Acronym	Description
BIR	Business Inventory Reconciliation
CDIM	Current Loop interface for the Veeder Root BIR
CUPS	Connector, Uninterruptable Power Supply
Dropbox	An internet service that allows for free file storage and download. If you like your own account, you can sign up here https://www.dropbox.com/referrals/NTE1OTA4Njk.
EDIM	Serial interface for the Veeder Root BIR
PAM	Pump Access Module, the Gilbarco equivalent to the Wayne HyperPIB
PIB	Pump Interface Board
SBC	Single Board Computer
SCC	Serial Communication Controller
SSH	Secure Shell
TCP/IP	Transmission Control Protocol/Internet Protocol
UDB	Universal Distribution Box
USB	Universal Serial Bus

1.3 Document Change History

Date	Ver	Revision	Author
6/10/2010	1.00	Initial Draft	Hartmut Engelke
6/11/2010	1.01	Network connectivity and additional details for 2.0.1.18 upgrades with PAM interface	Hartmut Engelke
6/25/2010	1.02	Added USB Maker reference Added information on saving logs and database Added WinSCP setup and connection information Added document download link Added USB key and pump comm. troubleshooting info	Hartmut Engelke
6/29/2010	1.03	Connecting Fusion to the Internet	Hartmut Engelke
7/29/2010	1.04	Updated links to selfimage.exe and Fusion HyperPIB/PAM image file. Removed imaging procedure for SSD. Updated information on non-working USB keys. Added information on how to upgrade Fusion with and without USB key. Added information on using Symantec Ghost for SSD card imaging.	Hartmut Engelke
9/03/2010	1.05	Added instructions to load the SCC-Emulator Fusion.	Hartmut Engelke
10/15/2010	1.06	Cleanup reference to non-existing document. Added information for the Fusion SCC-Emulator image file.	Hartmut Engelke
10/20/2010	1.07	Updated image file information, now the files are also available on ASONet	Hartmut Engelke
10/27/2010	1.08	Added information on using PuTTY and how to change the Fusion IP Address with PuTTY.	Hartmut Engelke
11/09/2010	1.09	Added information on connecting POS systems and the DSM. Added information on resetting the ADMIN password.	Hartmut Engelke

1.4 References

(1) USB Maker 2.0.pdf
http://dl.dropbox.com/u/159086/Fusion/USBMaker/USB%20Maker%202.0.pdf

(2) 940002 Fusion Installation - Nucleus Rev C.pdf
Available via ASONet on the Wayne Document Server.

2 Fusion Models

2.1 Fusion UDB

This Fusion model replaces the old AutoGas/Wayne UDB. It is designed as a one to one replacement of the older model, and as such is limited to support 16 fueling points. It's only intended for use with Wayne dispensers.

2.2 Fusion HyperPIB/PAM Emulator

Replaces the Wayne HyperPIB and the Gilbarco PAM1000. There are a variety of different configurations available for this Fusion model.

2.3 Fusion Console

Replacement for the Wayne D2400 Console.

2.4 Fusion SCC Emulator

This Fusion model replaces the SCC card previously used with the Wayne Nucleus POS system. It is only designed to support Nucleus. Not all Nucleus applications have been modified to support this Fusion model. It currently supports Wayne and Gilbarco dispensers. It also supports the interface to the VeederRoot CDIM and EDIM BIR modules.

2.5 Fusion Gateway

Replacement of the iXGateway previously provided by EK3.

2.6 Fusion Net

Allows multiplexing of RS485 CAT communication and TCP/IP communication.

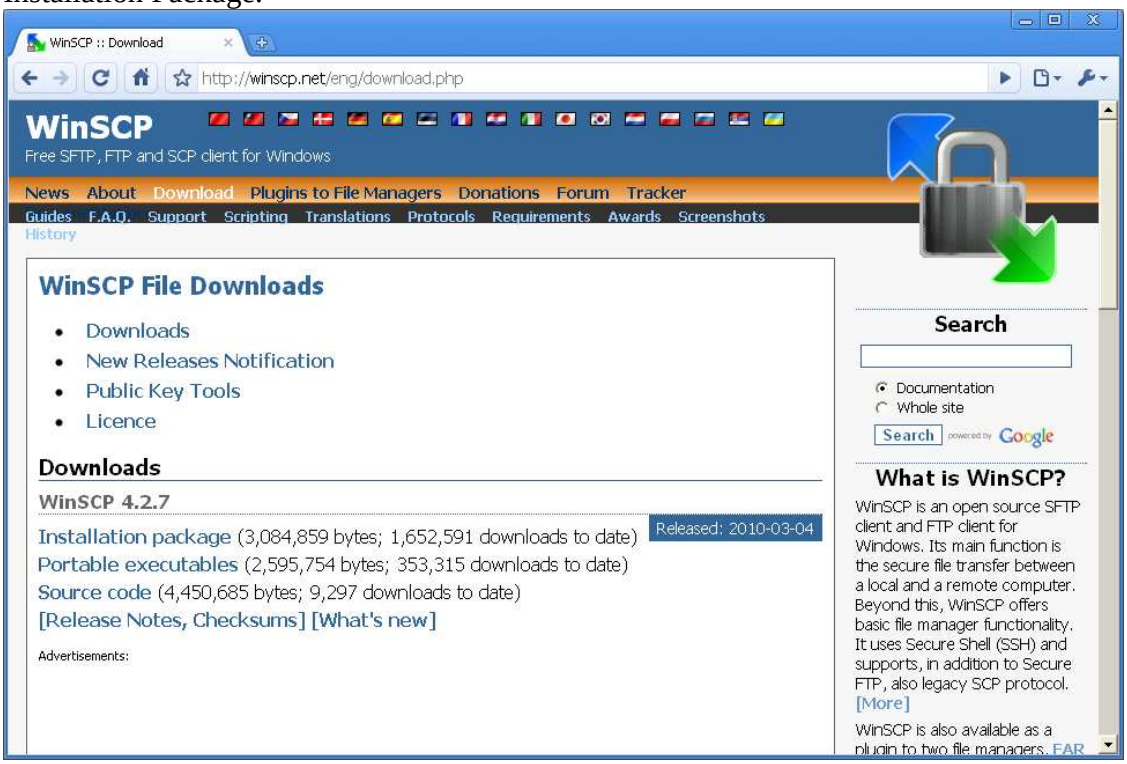
3 Utilities

3.1 Web Console

You can use any of the popular web browsers (Internet Explorer, Firefox, Chrome, Opera, Safari …) to access the web interface of the Fusion HyperPIB/PAM or Console by entering the Fusion's IP address in the browser's address bar. A web interface is not available for Gateway, Net or UDB.

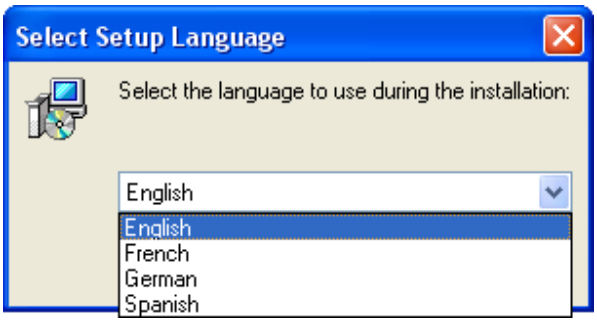
3.2 WinSCP

WinSCP is an open source SFTP and FTP client for Windows. Its main function is the secure file transfer between a local and a remote computer. Beyond this, WinSCP offers basic file manager functionality. It uses Secure Shell (SSH) and supports, in addition to Secure FTP, also legacy SCP protocol.
WinSCP can be downloaded for free from the Wayne ASONet, or directly through this link: http://dl.dropbox.com/u/159086/Fusion/winscpsetup.exe.
You can also download the latest release from the programs website at http://winscp.net/eng/download.php. When downloading from the web site, select the Installation Package.

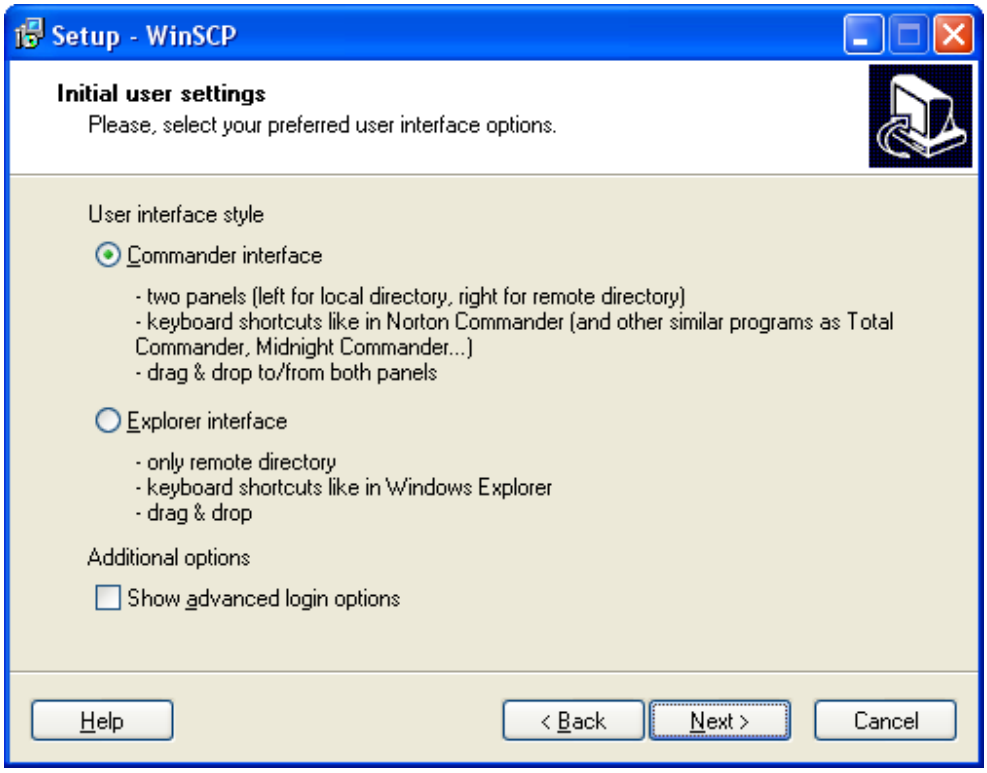


3.2.1 WinSCP installation

1. Open the installation program by double clicking on its icon.
2. Select the language you want to use (both for installation and later when using WinSCP.



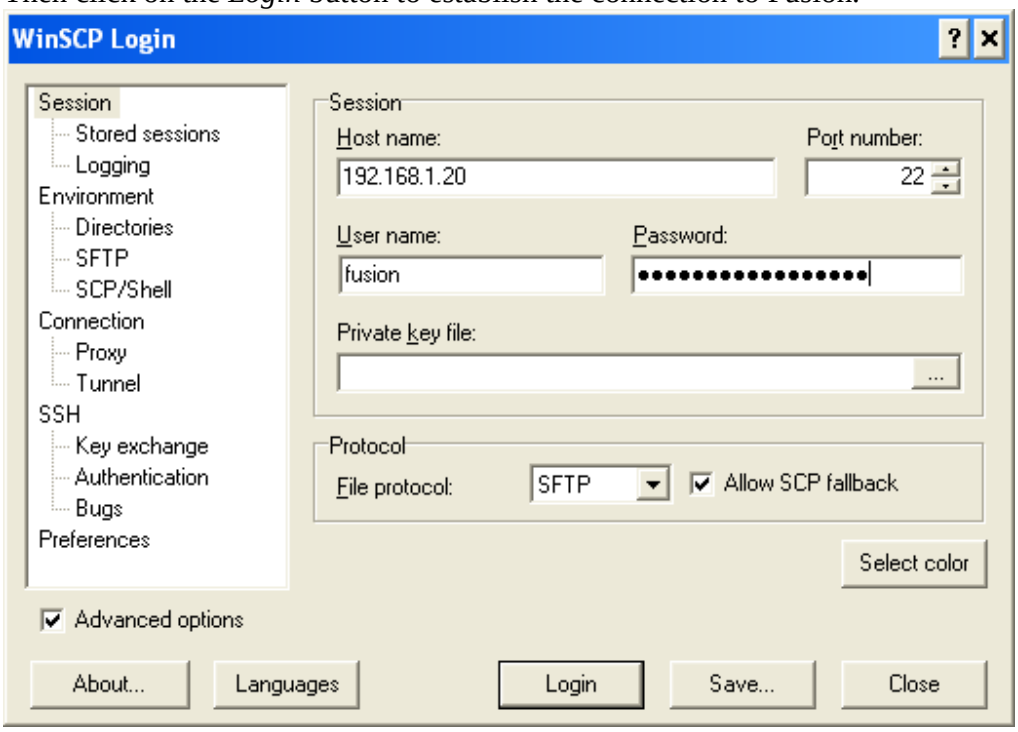
3. On the *Welcome* and *License Agreement* screens click *Next* after reviewing them.
4. You will be prompted to select a setup type. Choose *Typical Installation*.
5. After this you will be prompted for the *Initial User Settings*. This mainly allows you to select the **user interface style**. We recommend using the **Commander Interface**.



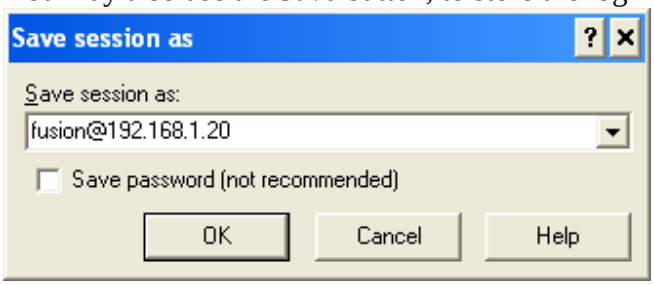
6. After you select the interface and click on the *Next* button, the *Ready to Install* screen opens. On this screen you can review the installation options you've selected. Click *Install* to start the installation.
7. A brief installation process will take place. You may have to restart you computer. If you choose not to restart, some WinSCP functions may not be available until you do so.

3.2.2 Connecting to Fusion

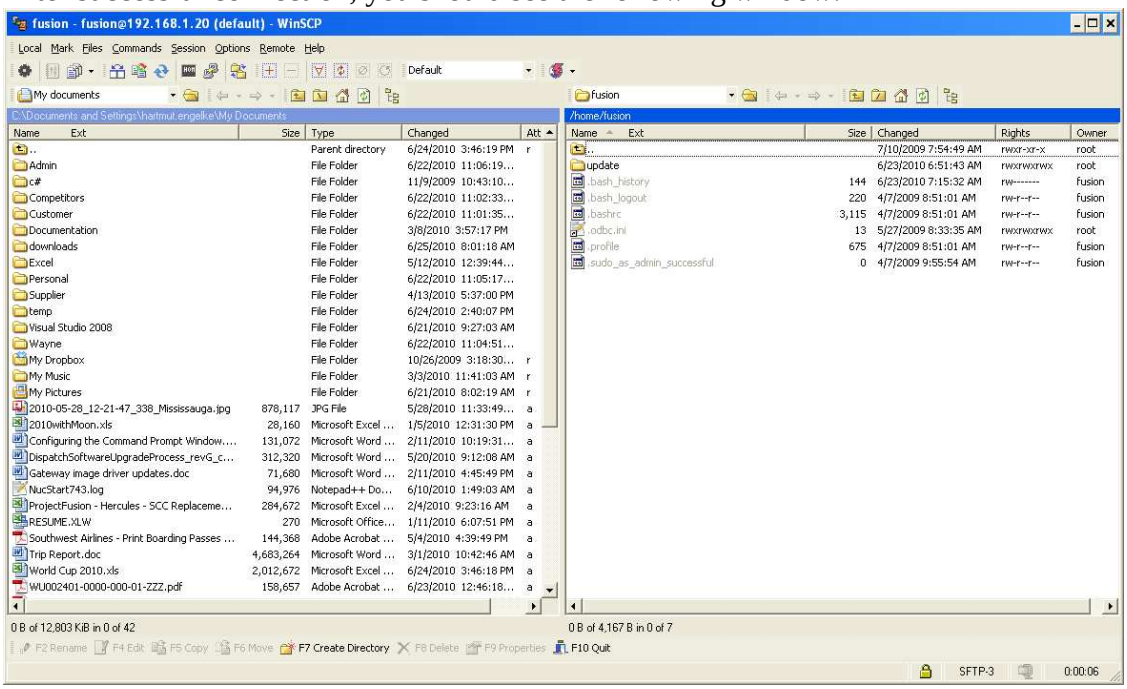
After connecting your laptop to Fusion, start WinSCP and click on the *New* button. Enter the Fusion IP address as the *Host name*. Also enter the *User name* and *Password*. Then click on the *Login* button to establish the connection to Fusion.



You may also use the *Save* button, to store the login information for a future session.



After successful connection, you should see the following window.



The remote system (Fusion) is on the right, while the laptop is on the left.

3.3 PuTTY

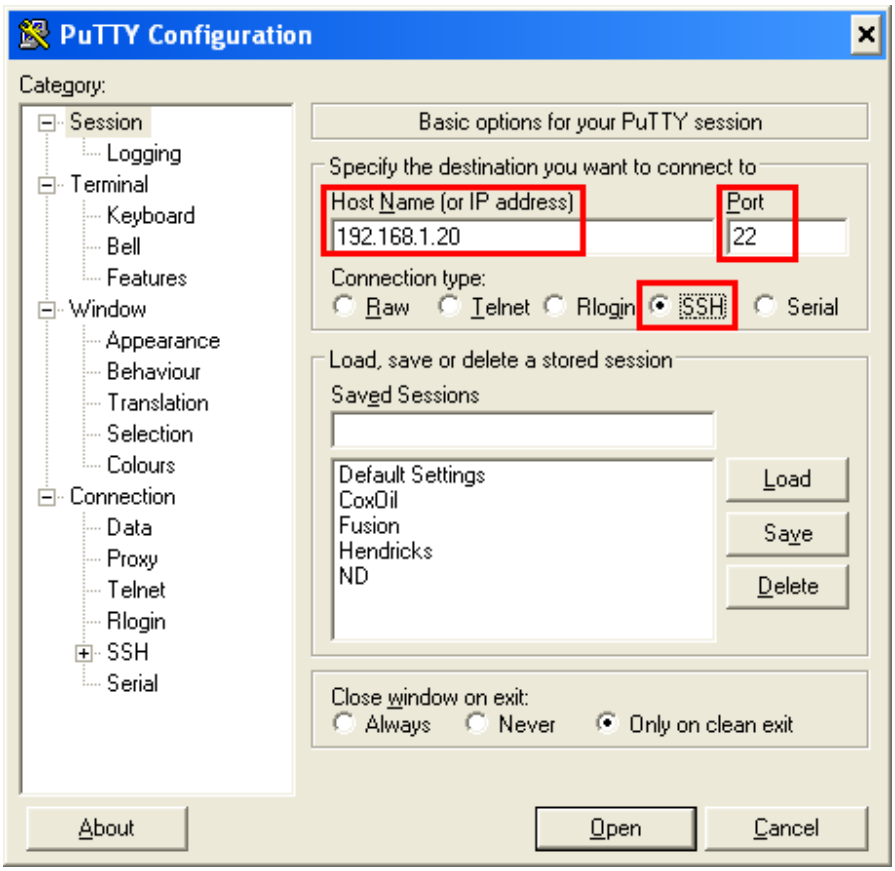
PuTTY is a free implementation of Telnet and SSH for Windows and Unix platforms, along with an xterm terminal emulator.
Putty can be downloaded from the ASONet or through this link
http://dl.dropbox.com/u/159086/Fusion/putty.exe.
The latest version is available at the developer's web site at
http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

3.3.1 Installation

The PuTTY software does not require any installation. Simply copy the executable to a location on our computer and click on the program icon to start the application

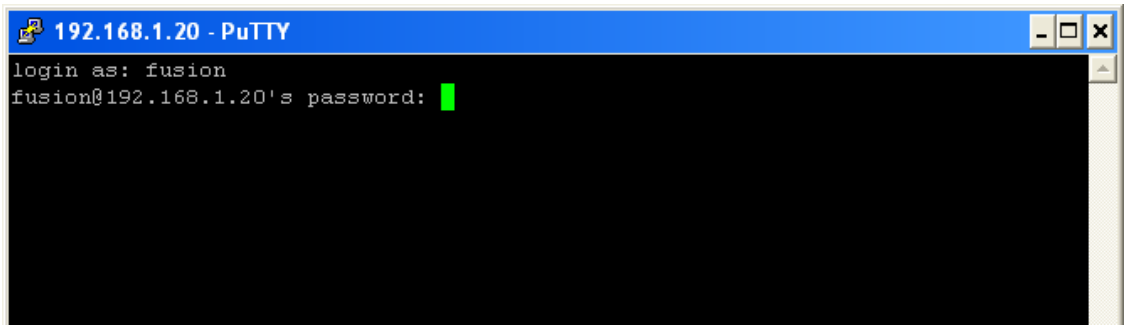
3.3.2 Connecting to Fusion

After starting PuTTY, you need to provide the connection parameters for Fusion.
The default values for Fusion are shown below.



After entering and selecting the correct values, click on the *Open* button to start the session.

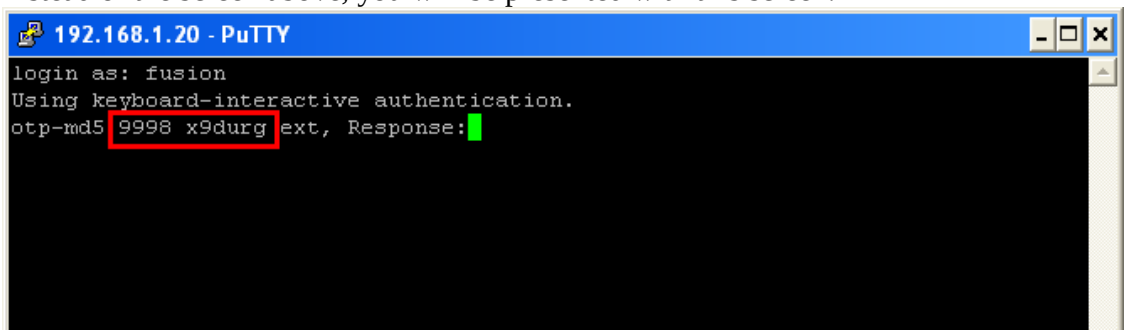
When connecting to Fusion, you will be required to log on to the system by providing the correct logon credentials.



In most cases this is a static userid and password.

In the case of the Fusion SCC-Replacement however, PCI regulations require a oneshot key access. Please call the Wayne Helpdesk if you need to obtain a passkey.

Instead of the screen above, you will be presented with this screen.



The values shown circled in read (including the space) are the required challenge code that needs to be presented to the Wayne Helpdesk.
The response code that will need to be entered at the PuTTY logon screen is a series of short words: **hurd cube ivan fit snag gilt**
The spaces between the letters must be entered as part of the response code.

3.4 SelfImage

SelfImage is capable of making an image file of a hard disk or hard disk partition, and can restore an image back to any drive or partition. Selfimage.exe is available through the ASONet and this link http://dl.dropbox.com/u/159086/Fusion/SelfImage.exe.

3.5 Norton Ghost/Symantec Ghost

Norton Ghost backs up and restores contents of hard drives, including all of its data - applications, settings, folders and files.

3.6 USB Maker

A Wayne developed utility to aid in upgrades and backups for the Fusion HyperPIB/Pam™, Console and SCC_Emulator product lines.
Please refer to the USB Maker 2.0 (1) documentation.
This document is available at
http://dl.dropbox.com/u/159086/Fusion/USBMaker/USB%20Maker%202.0.pdf

4 Loading Blank Fusion Media

4.1 Compact Flash

This section describes the process to re-image a compact flash card as used in the Wayne Fusion platform. It specifically addresses loading of the image for release 1 of the HyperPIB/PAM configuration, but can easily be adapted to other configurations or releases by replacing the image file.

4.1.1 Required Equipment

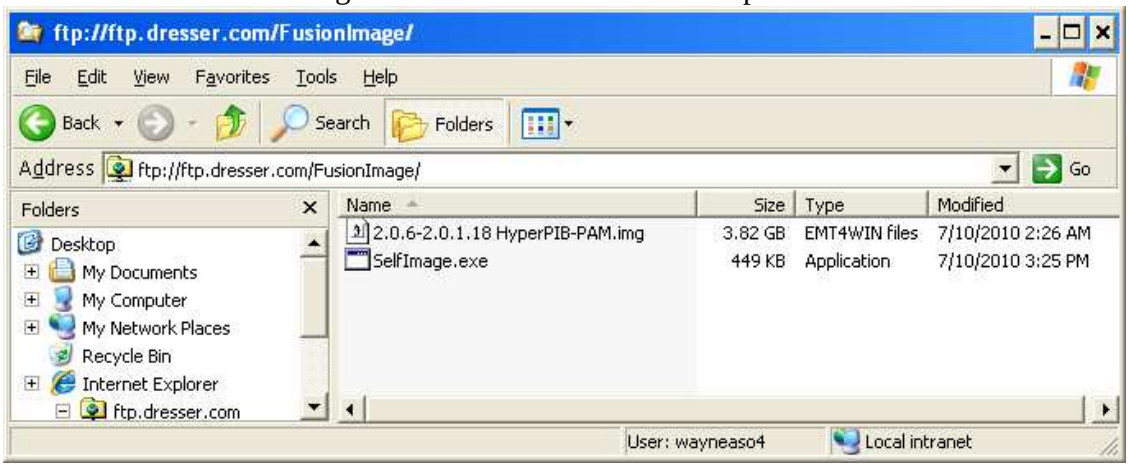
The following software is required:

- Selfimage.exe – the application used to image the compact flash card.

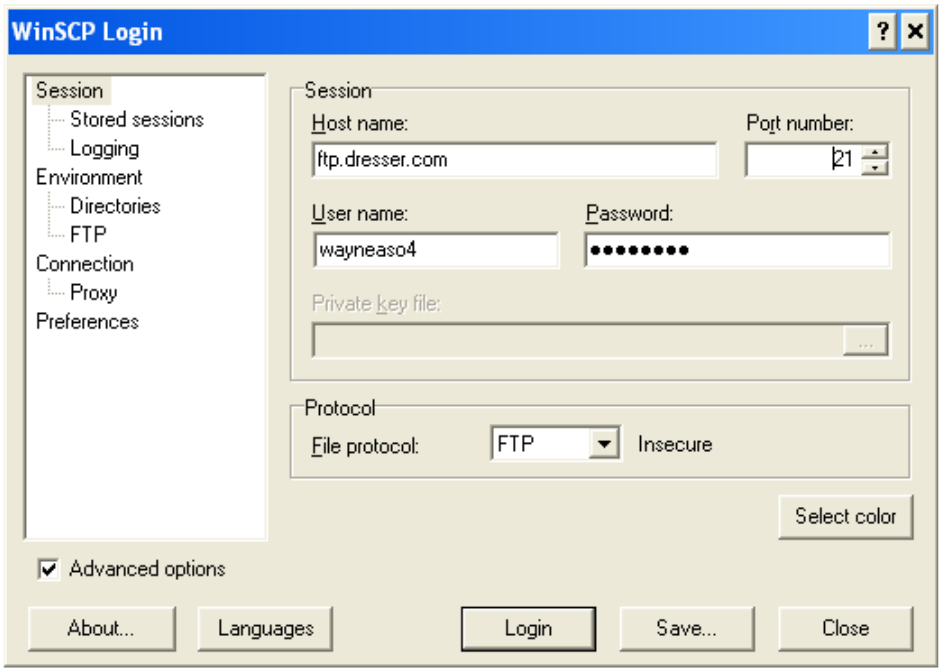
You will also need one of these image files, depending on the application.

- 2.0.6-2.0.1.18 HyperPIB-PAM.img.gz – the image file for Fusion HyperPIB/PAM release 2.0.1.18.
- 2.0.6-1.2.56.17 SCC Emulator.img.gz – the image file for Fusion SCC Emulator release 1.2.56.17.

Selfimage.exe and the image files are available on ASONet as well as the dresser ftp site ftp.dresser.com.
Use your ASONet login to download from there, or use an ftp client to pull the files form the ftp server.
For the ftp server, log on using wayneaso4 as the user name. The password is `cECrE6h4`.
The files can be found in the FusionImage directory.
Note that the image files are very large. You should have at least 4GB of disk space available and reserve enough time for the download to complete.



You might want to use the WinSCP utility to perform the image download. It appears to work more reliably than using Windows Explorer.
Use the following parameters to set up the session:
Host name: ftp.dresser.com
Port number: 21
User name: wayneaso4
Password: cECrE6h4
File protocol: FTP



In addition, the following hardware is required

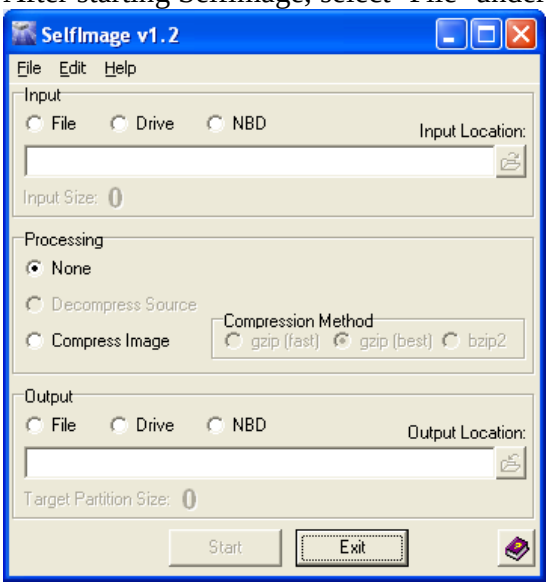
- A laptop with an available USB 2.0 port.
- A compact flash reader/writer, like the Belkin F5U249 or F5U249V (Wayne PN: 891343-001).

- An **industrial grade** compact flash card, 4 GB (Wayne PN: WU001454-0002).

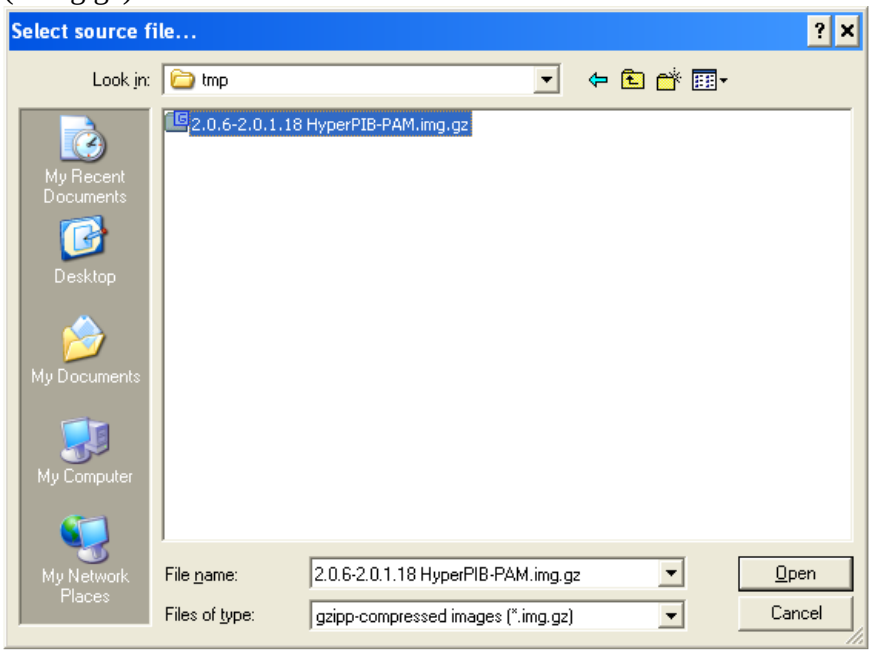
4.1.2 Process

IMPORTANT: This process will only work with an industrial grade compact flash. You should only use a DresserWayne provided compact flash card.

1. Install SelfImage (if not already installed)
2. Plug in the compact flash reader/writer with the compact flash card inserted.
3. Using SelfImage, install the Fusion image on the compact flash card:
    a. After starting Selfimage, select 'File' under Input



This will open the Select source file dialog.
Change the selection under 'Files of type' to gzip-compressed images (*.img.gz).



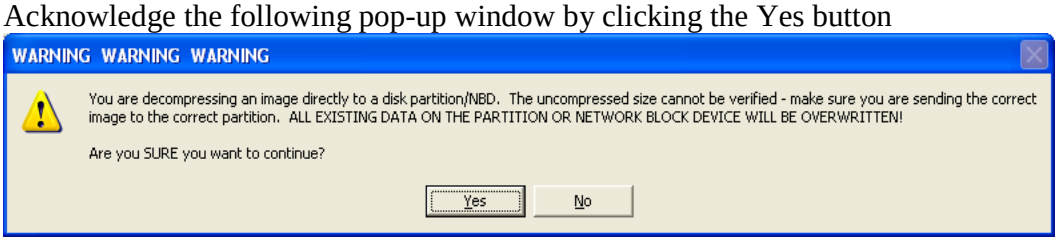
Navigate to the image file and select Open.

b. Select ‘Drive’ under Output

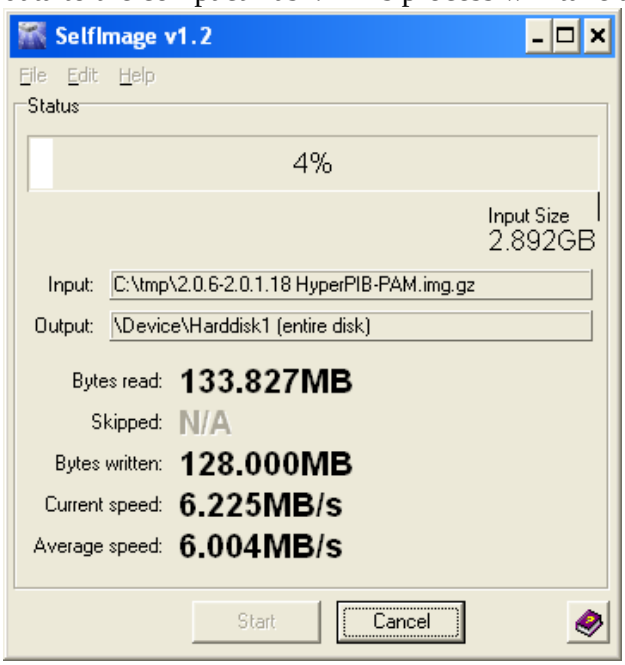
Using the Output Location pull-down menu, select the entire disk of the compact flash card.

c. Click the Start button

d. Acknowledge the following pop-up window by clicking the Yes button



e. The Selfimage program will display the progress while it is writing the data to the compact flash. This process will take about 11 minutes.



f. After the imaging process is completed, press the Exit button to close the program.

4. You can now remove the compact flash from the reader/writer and install it in the Fusion.

4.2 Solid State Drive

Loading the Fusion Gateway Image on a Solid State Drive is currently not supported for field use.

A preloaded SSD can be ordered from Wayne Service Parts. The part number is W2893259-001.

5 Upgrading Fusion Software

5.1 Upgrade HyperPIB/PAM with USB Drive

Using a USB key is the preferred method to upgrade Fusion if remote access is not available. You can use the USB Maker utility to create a USB key with the necessary files, but if you follow these steps, there will be no need to use the utility.

1. Download the FHP-2.0.6-2.0.1.18.zip file from http://dl.dropbox.com/u/159086/Fusion/FHP-2.0.6-2.0.1.18.zip.
2. Connect a USB drive to you laptop.
3. Extract the contents of the FHP-2.0.6-2.0.1.18.zip file to the thumb drive
4. Verify that the file was properly extracted. There should be a DresserWayne directory in the root of the thumb drive
5. Remove the thumb drive from your laptop and connect it to the Fusion USB port. Either port can be used for this process.
6. After a few seconds, you should hear a single beep. If you do not get the beep, see the 'USB key not working' section in this document to troubleshoot.
7. **You will loose connection to the forecourt, all pumps will go offline from the POS.**
   The process will take 5 to 10 minutes, after that everything should be ok.
8. If you are using PAM Emulation, check the '*Special note when upgrading to 2.0.1.18*' chapter..
9. After you are done, make sure POS Configuration is turned off, see chapter 7.

5.2 Upgrade HyperPIB/PAM without USB Drive

If an upgrade using a thumb drive is not possible, you can use the following method to upgrade Fusion.

1. If you haven't already, download and install WinSCP.
2. Download the FusionUpgrade.zip file from http://dl.dropbox.com/u/159086/Fusion/FusionUpgrade.zip.
3. Extract the contents of the FusionUpgrade.zip to a directory on your laptop.
4. Connect Fusion and laptop through Ethernet – you might have to change the IP address on your laptop to 192.168.1.21, netmask 255.255.255.0.
5. Start WinSCP and connect to Fusion, see chapter 3. Fusion IP is 192.168.1.20
6. Use userid **fusion** and password **DresserFusion2009** to log into Fusion.
7. On the left half of the WinSCP screen, you have the local laptop, on the right side, you have the Fusion.
8. On the left side, navigate to the folder with the extracted FusionUpdate files.
9. On the right side, navigate to /home/fusion/update (by default you should already be in /home/update).
10. Copy all files from the laptop side to the fusion side **with the exception of the update.end file**.
11. After the copy of the files is complete, now copy the update.end file – this will initiate the upgrade.
    You will loose connection to the forecourt, all pumps will go offline from the POS.
    The process will take 5 to 10 minutes, after that everything should be ok.
12. If you are using PAM Emulation, check the '*Special note when upgrading to 2.0.1.18*' chapter.
13. After you are done, make sure POS Configuration is turned off, see chapter 7.

5.3 Upgrading SCC-Emulator

There are two basic methods to upgrade the Fusion SCC-Emulator application. The first method is taking advantage of the Nucleus Copy CD For Later (CCDFL) process, the second method is using a USB thumb drive to upgrade the application. A Nucleus system is not required for the second method. Different files are available for download based on the upgrade method.

Note: *You only need one type of these files depending on the method you plan to use to upgrade the Fusion. If you plan on using the* 'Copy CD For Later' *method through Nucleus, continue with section 5.3.1 and download one of the file packages listed there. If you plan to use a USB thumb drive, do not download the files from section 5.3.1, instead go directly to section 5.3.2 and load the file listed in that section.*

5.3.1 Copy CD For Later

5.3.1.1 Obtaining Files

There are two file packages available through the Wayne ASONet file download area. The first package is a ZIP file (DispatchCD1.2.56.17Files-20100831.zip) that allows to burn the files directly to a blank CD and the second is an ISO image (DispatchCD1.2.56.17-20100831.iso) for burning a CD.
These files are also available through a dropbox share.

Note: *You only need one of these files, depending on the method you plan to use to burn the CD.*

DispatchCD1.2.56.17-2.0.6Files.zip:
http://dl.dropbox.com/u/159086/Fusion/DispatchCD1.2.56.17-2.0.6Files.zip
DispatchCD1.2.56.17-2.0.6.iso:
http://dl.dropbox.com/u/159086/Fusion/DispatchCD1.2.56.17-2.0.6.iso

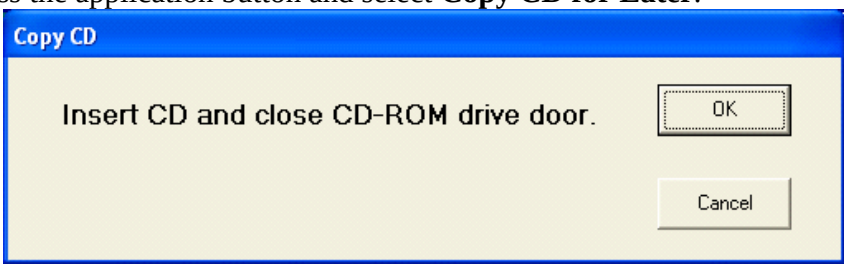
5.3.1.2 Creating a CD

The process of creating a CD based on these files varies based on the utility you are using for this process. It is recommended that you consult the user manual of your application to determine the proper CD creation process.
Discussing this process in detail is beyond the scope of this document. As a general guideline however, if you are starting out with the ZIP file, it will be necessary to extract the files to a directory on your local system before you will be able to successfully create a CD. If you are using the ISO image, special instructions will apply to create the CD. Simply copying the ISO file to a blank CD will not create a working dispatch CD.
Wayne Engineering has compiled a quick guide that explains the CD creation for a variety of the most popular CD burning programs.
This document is available on the ASONet and at
http://dl.dropbox.com/u/159086/Fusion/Creating%20a%20CD%20from%20a%20CD%20ISO%20image.pdf.

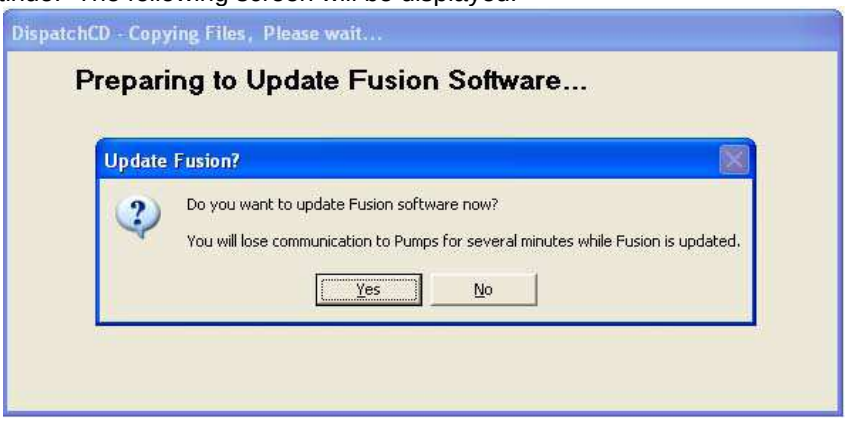
5.3.1.3 Applying the upgrade

Use the "Copy CD for Later" feature to transfer files from a CD to the Fusion box. The operation is very similar to the normal "Copy CD for Later" that a site would use for updating Nucleus. Be aware that at the conclusion of the copy process, the dispensers will go offline for several minutes as the Fusion code is updated. Pick a slow time at the station before beginning the update.

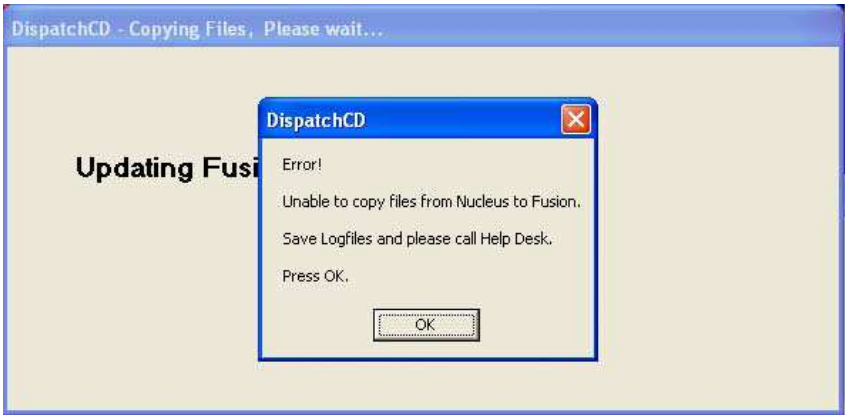
1. From Nucleus, stop all pumps one at a time as the customers finish their transactions.
2. Press the application button and select **Copy CD for Later**.



3. Open the CD tray, insert the Fusion update CD and then close the tray. Press **OK** to continue. The following screen will be displayed.



4. A notification is displayed informing the user that a Fusion update is about to take place and that the pumps will be offline during this process. Press **Yes** to continue.
5. If any errors are encountered during the copy process then the following notification will be displayed. Otherwise, the update will proceed and Fusion will restart using the updated code.



5.3.2 USB Key

5.3.2.1 Obtaining Files

A ZIP file is available for download from the ASONet. The files in the ZIP file have specially been prepared to work with the Fusion upgrade mechanism.
The file (FSCC-1.2.56.17-2.0.6.zip) is available on ASONet for download and can also be found here: http://dl.dropbox.com/u/159086/Fusion/FSCC-1.2.56.17-2.0.6.zip.

5.3.2.2 Preparing the USB key

After downloading the file extract the contents of the ZIP file to a USB key. After extracting the files, you should see a DresserWayne directory in the root of the USB thumb drive.

5.3.2.3 Installing the upgrade

You will loose connection to the forecourt while the Fusion application is upgraded. Please make sure no customers are using the pumps during the upgrade.

- Insert the USB drive into the USB port of the Fusion.
- After a few seconds, you should here a single beep after you insert the key.
- About a minute later you should here a series of 4 beeps indicating a successful install. A series of 3 beeps will indicate an error.
- Remove the USB key from the Fusion.

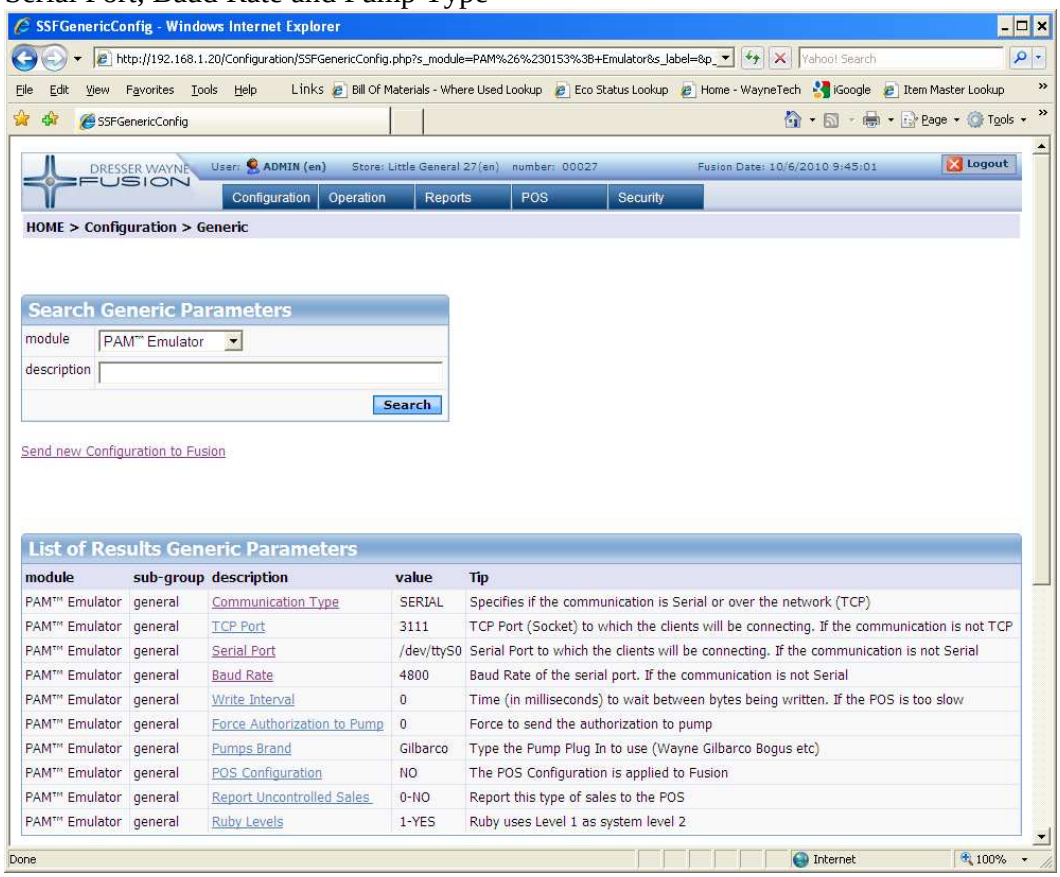
The USB key will only update a single Fusion system. To update a second Fusion, you have to extract the zip file again onto the thumb drive.

5.4 HyperPIB/PAM™ and Console

5.4.1 Special note when upgrading to 2.0.1.18

When you upgrade an existing Fusion site that is configured to use the PAM protocol to communicate with the POS, you have to take a few extra steps. This applies to all upgrades where the software version is upgraded from a version older than 2.0.1.18 to a version 2.1.0.18 or higher, but does not apply to version updates after that (i.e. 2.0.1.18 to 2.1.2).

- From the Web Console, go to Configuration->Generic
- In the module pull down box of the Search Generic Parameters window, select PAM™ Emulator and click on the 'Search' button.
- Record the configuration of the interface, specifically communication type, Serial Port, Baud Rate and Pump Type

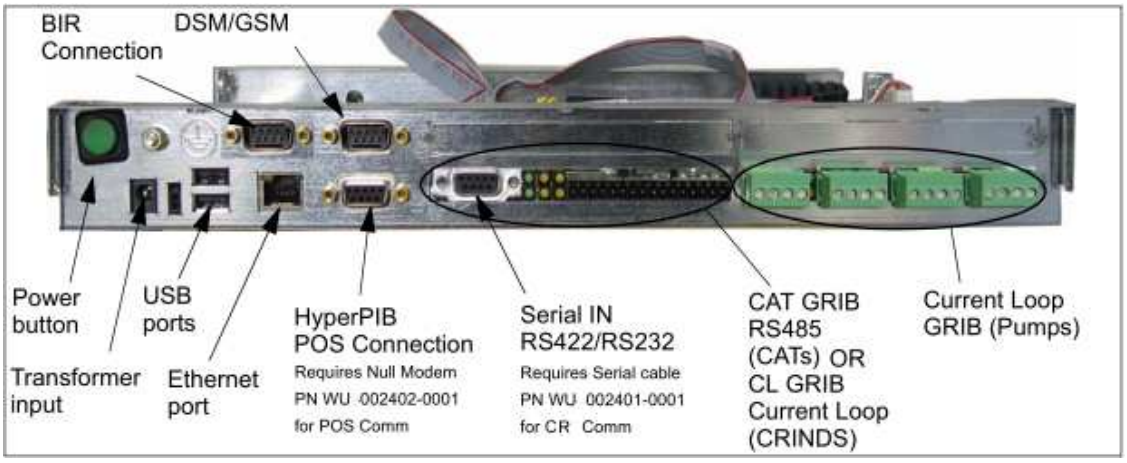


- During the upgrade, all settings in this area will be reset to the defaults, and the PAM interface will be disabled.
- After the upgrade, go back to the PAM Emulator configuration screen and re-program the interface with the values recorded earlier

6 Connecting the POS

6.1 Verifone Ruby/Topaz/Sapphire

Each Fusion HyperPIB/PAM unit is shipping with two connectors that make connecting the Verifone POS system a snap.
Connector WU002401-0001 connects to the DB9 on the serial GRIB for the POS communication to the card readers.
Connector WU002402-0001 connects to the HyperPIB POS connection for the POS communication to the pumps.
From these connectors, you can use the Verifone serial cable (13836-01) to connect to the designated serial port on the Verifone POS.

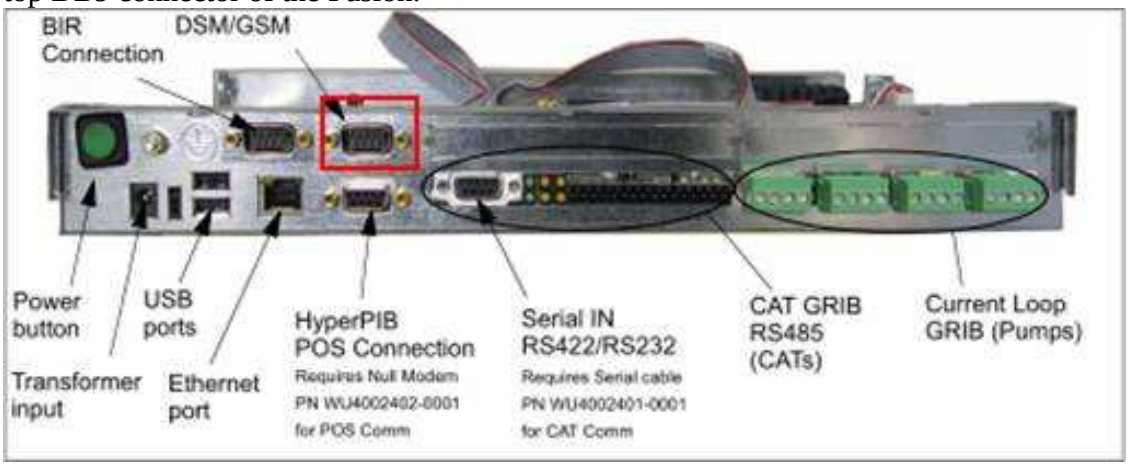


6.2 Gasboy POS/Fiscal POS

This also applies to any other POS that is using standard PC Serial ports (DB9 male).
A NULL-Modem cable is required to connect from the POS pump communication port to the Fusion HyperPIB POS Connection.
A straight through cable is required to connect from the POS card reader communication port to the Fusion Serial IN port on the Fusion GRIB.

7 Connecting the DSM

A wiring change needs to be made inside the Fusion.
If present, remove cable WU001259-0001 from J14 on the CUPS board and COM2 of the SBC. This cable will not be present on the Fusion UDB replacement.
Connect Cable WU001265-0001 to J6 on the CUPS board and J8 of the serial GRIB (the CAT GRIB)
Connect WU002344-0001 to the two PIN connector of WU002290-001.
Connect one of the DB9 connectors of WU002290-001 to the MSM and the other to the top DB9 connector of the Fusion.



Plug WU002344-0001 into a power outlet.

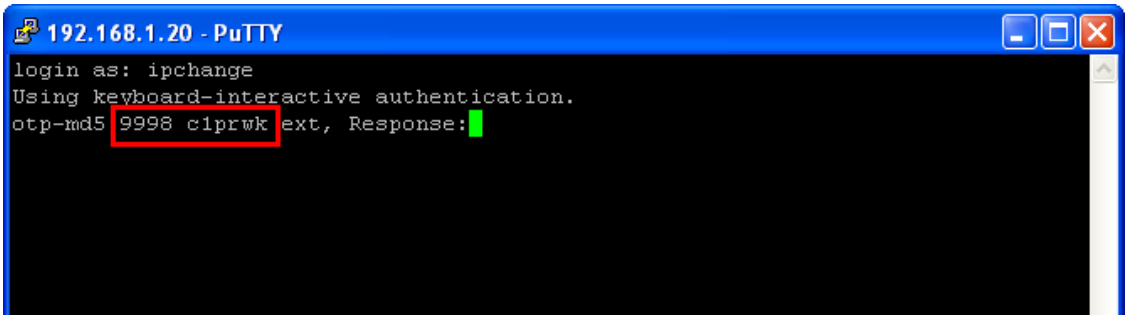
8 Changing Fusion IP Address

There are two methods to change the IP address of the Fusion.
The first and recommended approach is to use the USB Maker to create a USBKey with the required information. Please refer to the USB Maker documentation on this process.

The second method is to use the PuTTY utility to connect to Fusion

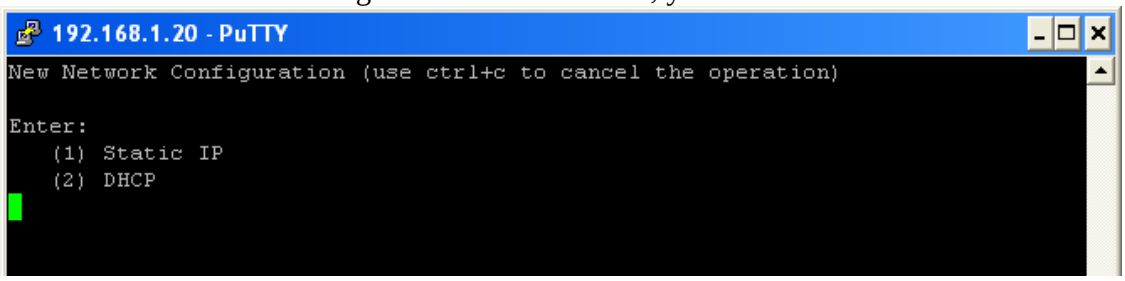
At the login screen, use *ipchange* as the login ID.
For most Fusion systems, the password for the ipchange account is *ipchange*.

For the Fusion SCC-Replacement a oneshot key is required and you will be presented with this screen.

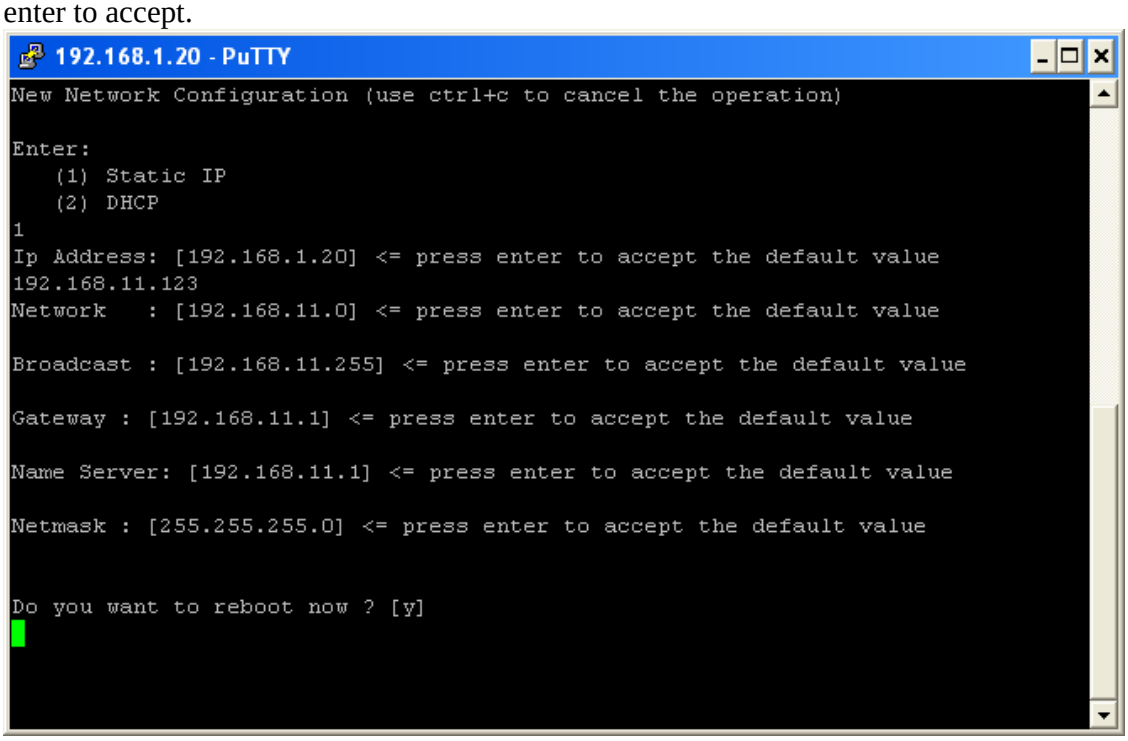


The values shown circled in read (including the space) are the required challenge code that needs to be presented to the Wayne Helpdesk.
The response code that will need to be entered at the PuTTY logon screen is a series of short words, for example **sal oral ante kind how len**
The spaces between the letters must be entered as part of the response code.

The next screen after successfully logging on will ask if you want to use a Static IP or DHCP for the network configuration. In most cases, you would choose Static IP.

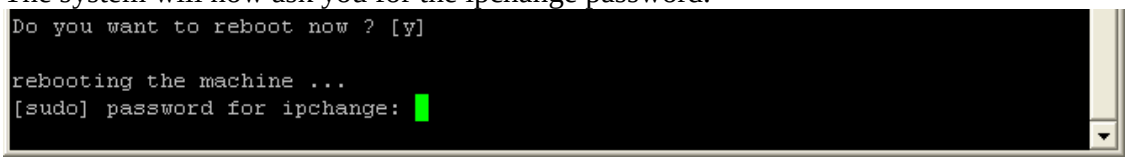


The program will then prompt you to enter the required values. For each value, a recommended default value will be presented. To accept this default value, simply press enter to accept.



After entering all values, press *Enter* to reboot Fusion.

The system will now ask you for the ipchange password.



Always enter *ipchange* at this time, even when working with the Fusion SCC-Replacement system.

After changing the IP Address on Fusion, remember to change the IP Address on your laptop to match the new network settings if you need to access Fusion.

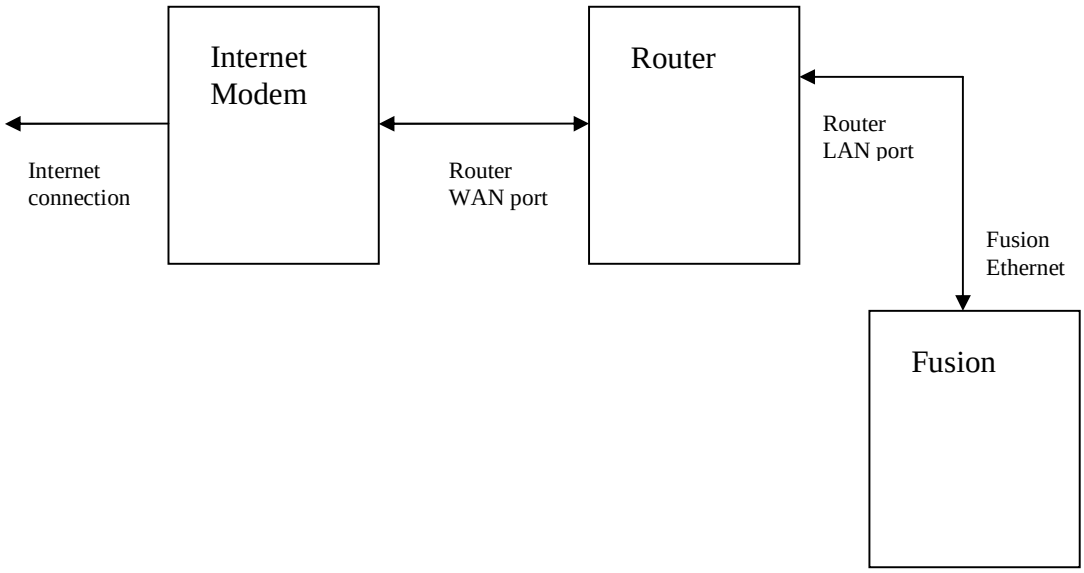
9 Connecting Fusion to the Internet

How you connect the Fusion system to the internet depends heavily on the network setup and internet connection at the location. The information below is based on a fairly simple configuration and may not apply in your situation. If you have an IT department, please contact them to have the Fusion and the network configured for remote access.

In this configuration there are two devices in addition to the Fusion.

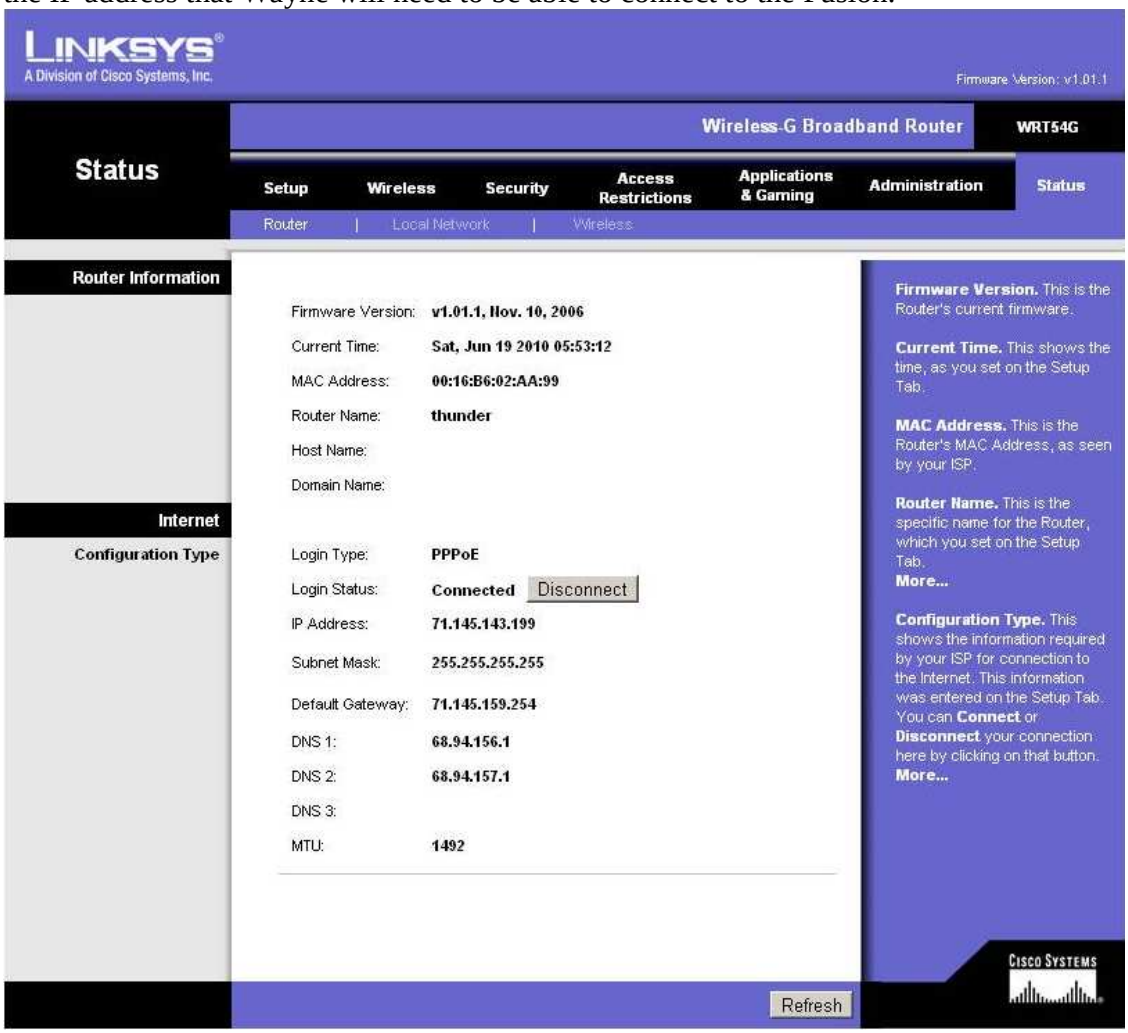
1. The internet modem, provided by your internet provider. This can be a DSL or a cable modem. Important is that your internet plan provides you with a **static** IP address.
2. A router. In this case I used the Wireless G Broadband Router, model WRT54G from Linksys. For a station environment you probably would use a router without wireless capability.

The wiring looks like this:



In this scenario, the router configuration is left as the standard, so the router's LAN IP address is set to 192.168.1.1. The router is providing IP addresses via DHCP in the 192.168.1.100 and above range for computers that connect with DHCP enabled.
Fusion should not be configured for DHCP. It should always be configured with a fix IP. In this case, we left the IP address of the Fusion at the default of 192.168.1.20.

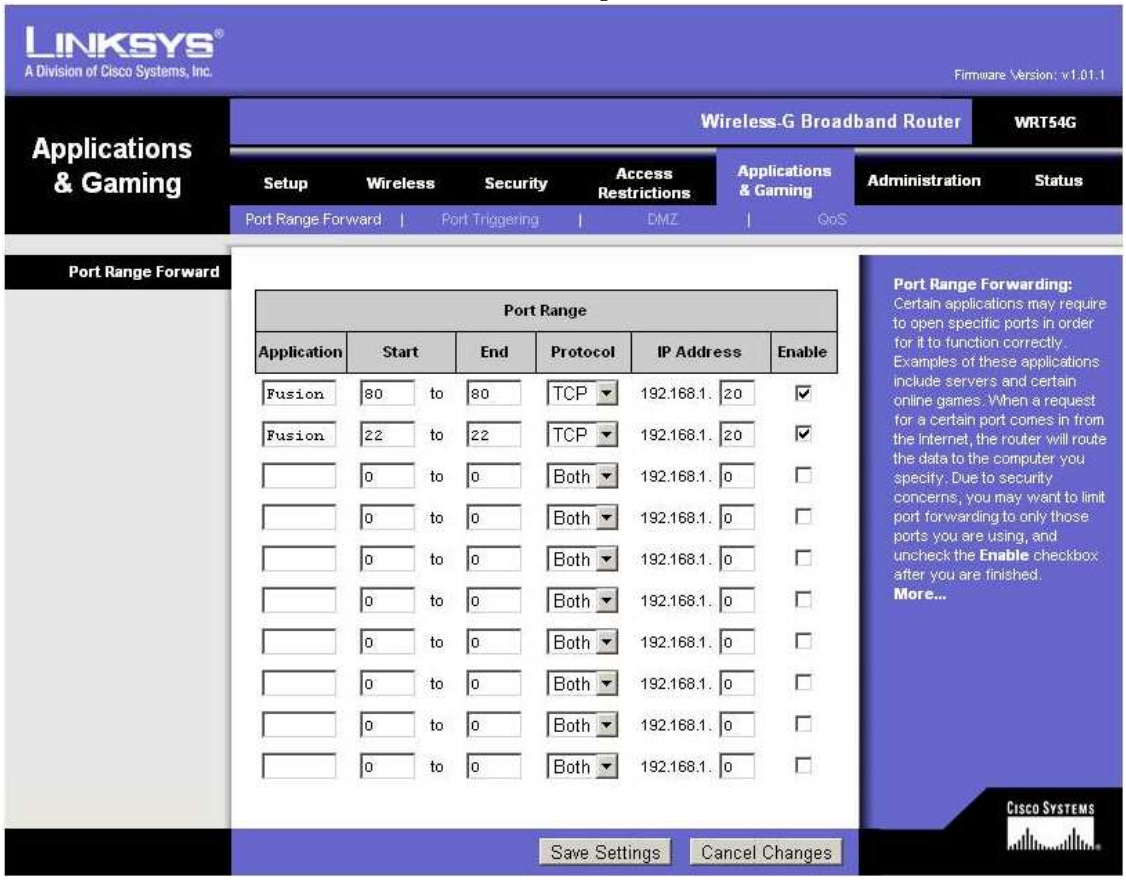
On the Status screen of the router you can see the WAN information. The IP Address listed here should match the static IP Address provided by the Internet provider. This is the IP address that Wayne will need to be able to connect to the Fusion.



To be able to connect to the Fusion, additional programming in the router is required. Under the Applications & Gaming tab, you will find the 'Port Range Forward' screen. On this screen, two port range forward settings need to be configured.

1. Port 80, TCP to 192.168.1.20
2. Port 22, TCP to 192.168.1.20

See the screen shot below for details on the setup



This is all that is required to establish remote connection to Fusion, but again, based on your equipment the steps for setup will vary.

10 Troubleshooting

10.1 HyperPIB/PAM, Console

10.1.1 Network connectivity

If you are unable to establish a connection, make sure the laptop is not running at 1GB connection speed. You should either connect through a switch that limits the speed to 10/100, or change the setup on the laptop network connector to limit it to 100MB.

10.1.2 Saving Information for Engineering Review

Download the zip file from the location below
http://dl.dropbox.com/u/159086/Fusion/FusionDBBackupPers.zip
To collect the data, the following needs to be done:

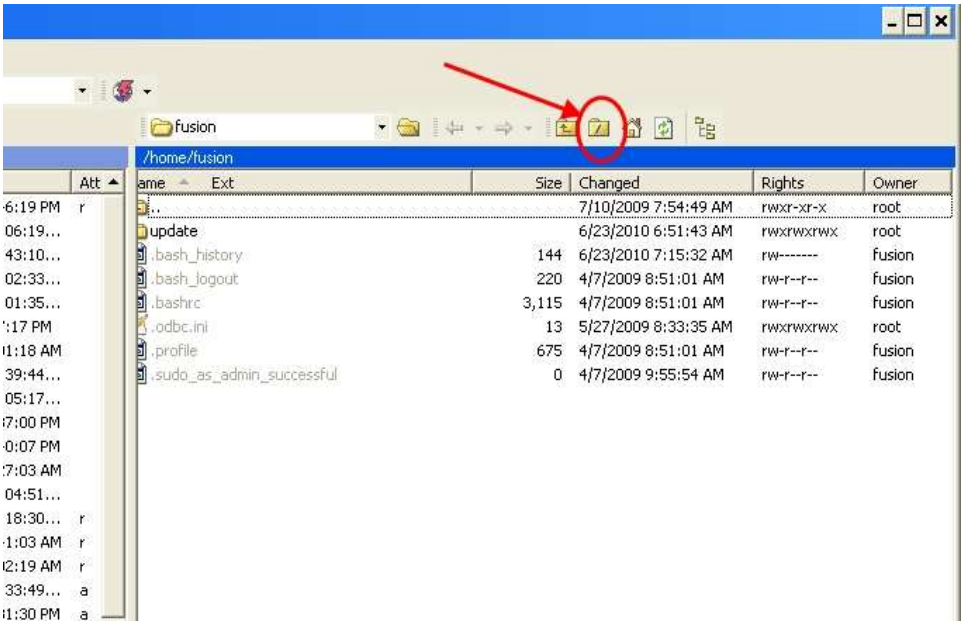
1) Take the downloaded zip file and extract its content to a USB key
2) Plug the USB key into Fusion
3) After a few seconds you should hear a single beep
   See section 6.2.4 if you do not hear the beep.
4) Another minute later or so, you should hear 4 beeps. These beeps should repeat on the newer version of the Fusion application, but might only occur once on older versions
5) After the 4 beeps, remove the USB key from the Fusion.

On the laptop, extract the logfiles and Fusion database and send to Wayne for investigation.
The logfiles will be in the directory \DresserWayne\Fusion\logs
There will be a folder with a name that starts with the letters 'fs', followed by numbers and letters, followed by date and time of the fusion box (example fs00187d07ed3e-20100618-060916). Zip up that folder and send it to Wayne.
The database will be in the E:\DresserWayne\Fusion\Backups\Database directory.
The database file name will start with 'DBbackup.fs' followed by numbers and letters, followed by date and time of the fusion box (example DBbackup.fs00187d07ed3e-20100618-063104). This file should also be send to Wayne.

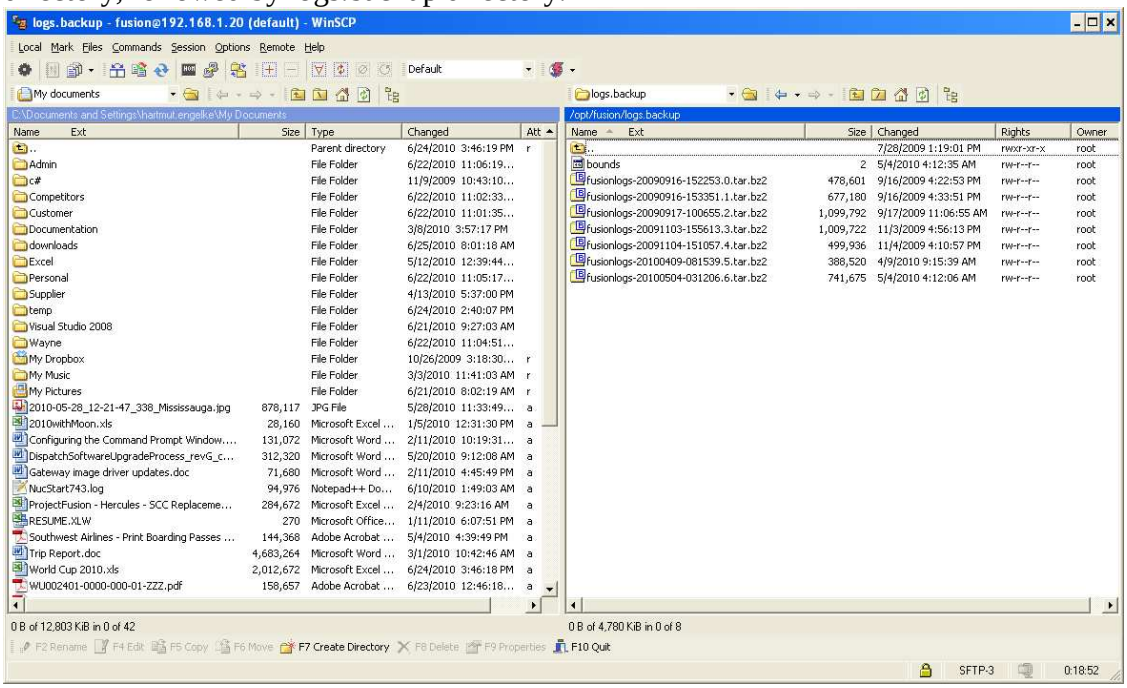
> ***Note** however that when you follow this procedure shortly after rebooting the Fusion, you will only pull log information since the reboot. This might not be the information needed to investigate the issue. See the section below on how to retrieve the logs prior to the reboot.*

10.1.3 Retrieving archived logfiles

Connect to the Fusion using WinSCP, see section 3.2 on how to install WinSCP and how to connect to Fusion.
On the initial screen, click on the 'root' button on the right side of the screen.



On the right side window, double click on the opt directory, followed by the fusion directory, followed by logs.backup directory.

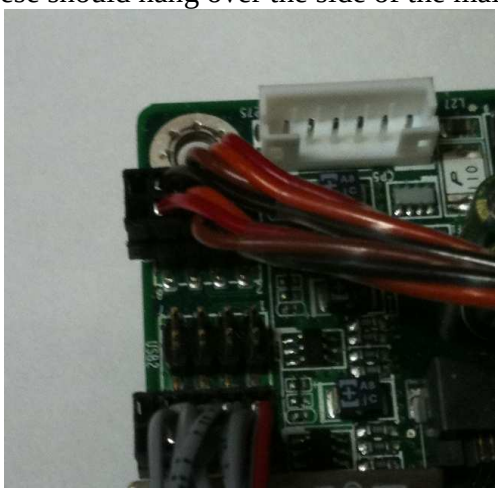


Copy the files from the right panel to your computer (left panel). Send the files, including a description of the error to the Wayne Helpdesk. If the issue involved certain transactions, please note the time, date and pump# on your issue report.

10.1.4 USB key not working

Scenario: When inserting the USB key into Fusion, you do not hear the initial beep, which would normally indicate that Fusion detected the USB key.

Solution 1: Check the wiring inside the Fusion. Cable part number WU001817-0001 needs to be present, running from J5 and J8 of the CUPS board to USB3 of the SBC motherboard.
Check for correct connection on the USB3 connector. The connector itself has two extra slots that are unused. These should hang over the side of the main board.



Solution 2: We have encountered some make/models of USB thumb drive that do not work properly. If the cable connection is ok, try another brand USB key.

Solution 3: For the USB feature to work, you must at least be at version 2.0.4 of the compact flash application and 1.2.23.10 of the HyperPIB/PAM application. If your version is older than this, please check this document on how to upgrade Fusion without a USB key.

10.1.5 Reset ADMIN password

If you are unable to log on to Fusion using the default ADMIN password *Dresser3141*, you might have to reset the password. Follow this procedure to reset the password.

Option 1:

Using a USB Key and USB Maker 2.0.

1. Download the Fusion Reset.zip and USBMaker2.0.zip files from the ASONet.
2. Extract the files from the zip file to a directory on you laptop.
3. Follow the instructions in the Reset Fusion Admin Password.pdf document to configure a USB key and to reset the password.

Option 2:

If resetting with a USB Key is not working.

1. If you haven't already, download and install WinSCP.
2. Download the Fusion Reset.zip file from the ASONet.
3. Extract the contents of the Fusion Reset.zip to a directory on your laptop.
4. Connect Fusion and laptop through Ethernet – you might have to change the IP address on your laptop to 192.168.1.21, netmask 255.255.255.0.
5. Start WinSCP and connect to Fusion, see chapter 3. Fusion IP is 192.168.1.20
6. Use userid **fusion** and password **DresserFusion2009** to log into Fusion.
7. On the left half of the WinSCP screen, you have the local laptop, on the right side, you have the Fusion.
8. On the left side, navigate to the folder with the extracted Fusion Reset files.
9. On the right side, navigate to /home/fusion/update (by default you should already be in /home/update).
10. Copy the 3 genericupdate-ResetADMINPassword*.* files in the *Fusion Reset* directory from the laptop side to the fusion.
11. After the copy of the files is complete, now copy the update.end file – this will initiate the upgrade.
    The process will take less than 2 minutes.
12. Now logon to Fusion, User ADMIN, leave password blank. When prompted to change password, leave OLD password blank.

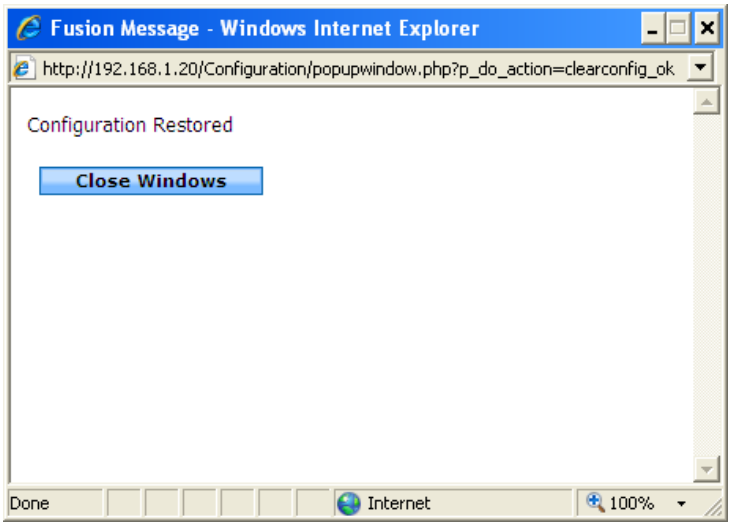
10.2 HyperPIB/PAM and Console Pump communication

10.2.1 Start with a clean slate

To make sure you are not dealing with old configuration data, clear the configuration on the Fusion following these steps.

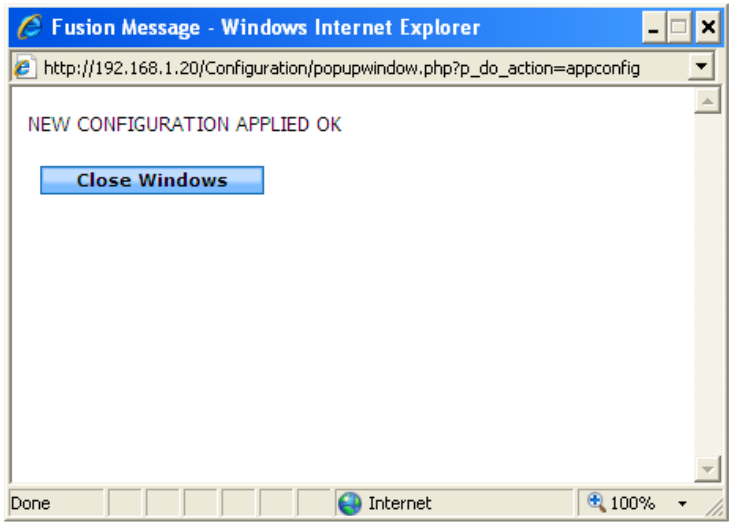
1. Connect to the Fusion web Console and log on to Fusion
2. Go to Configuration->Maintenance->Clear Configuration
3. Click ok on the next window

4. Select Close Windows



5. Go to Configuration->Maintenance->Apply Configuration

6. Select Close Windows



10.2.2 Make sure you have the latest application version

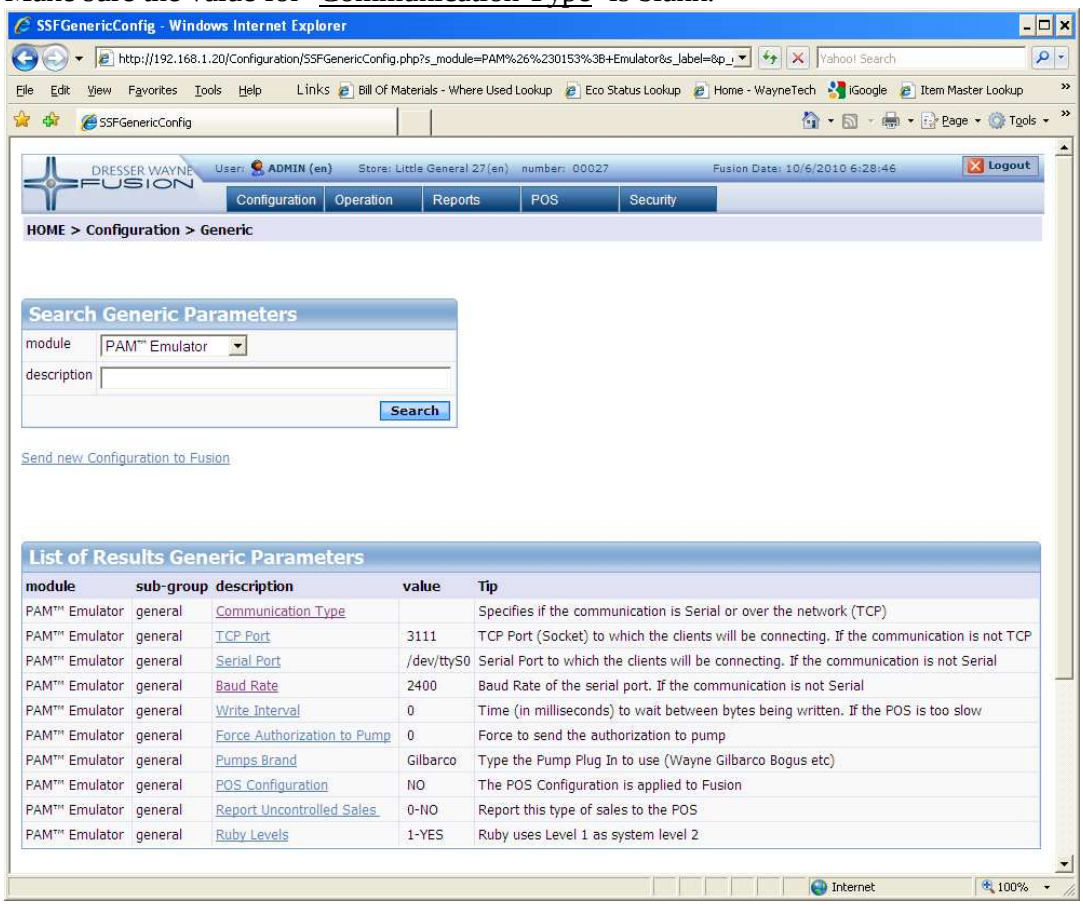
For the HyperPIB/PAM™ and Console applications

- From the Web Console, go to Reports->Miscellaneous->Versions
- The box at the top of the Fusion is labeled ‘Fusion Application Version’ and will show two versions
  - Fusion Compact Flash Version
  - Fusion Version: HyperPIB/PAM or Console

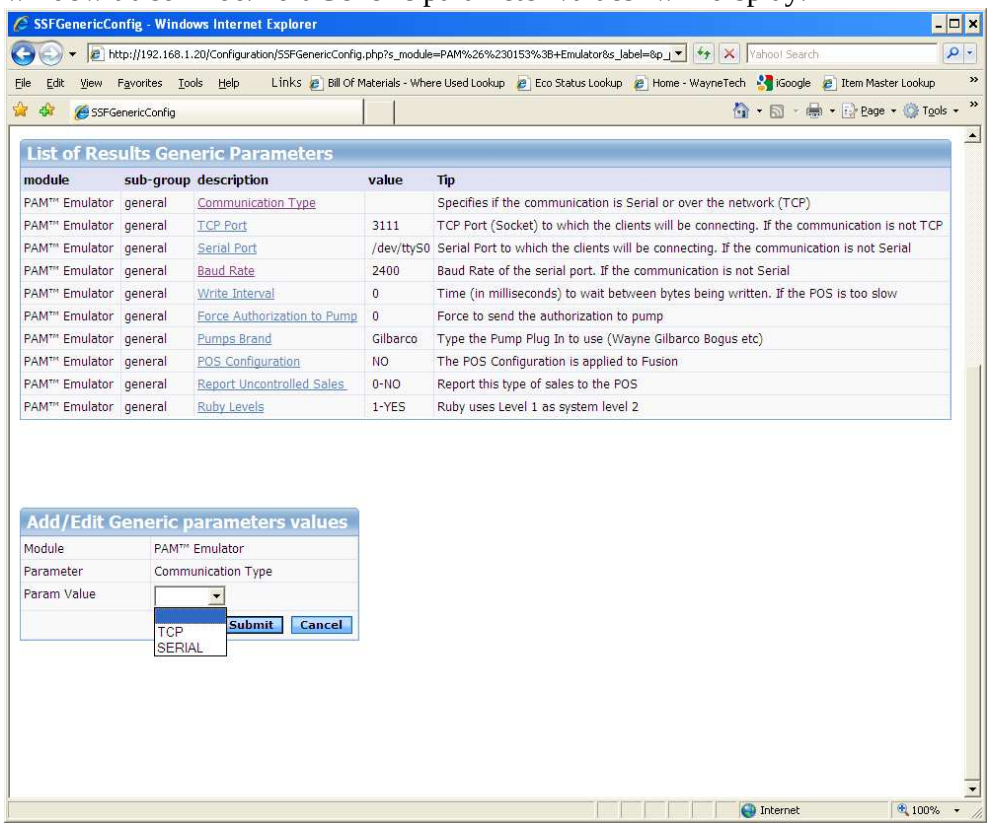
10.2.3 Only have one POS interface active

If the POS is using the HyperPIB protocol, make sure that the PAM™ interface is disabled.

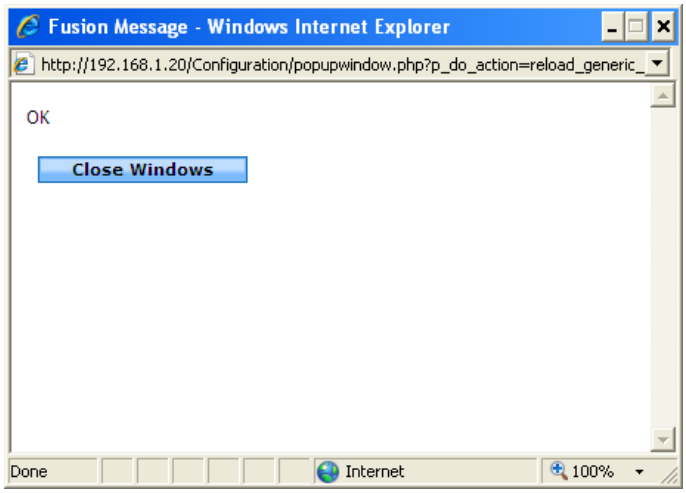
- From the Web Console, go to Configuration->Generic
- In the module pull down box of the Search Generic Parameters window, select PAM™ Emulator and click on the 'Search' button.
- Make sure the value for 'Communication Type' is blank.



- If this value is not blank, click on the ‘Communication Type’ link, and a new window titled ‘Add/Edit Generic parameter values’ will display.

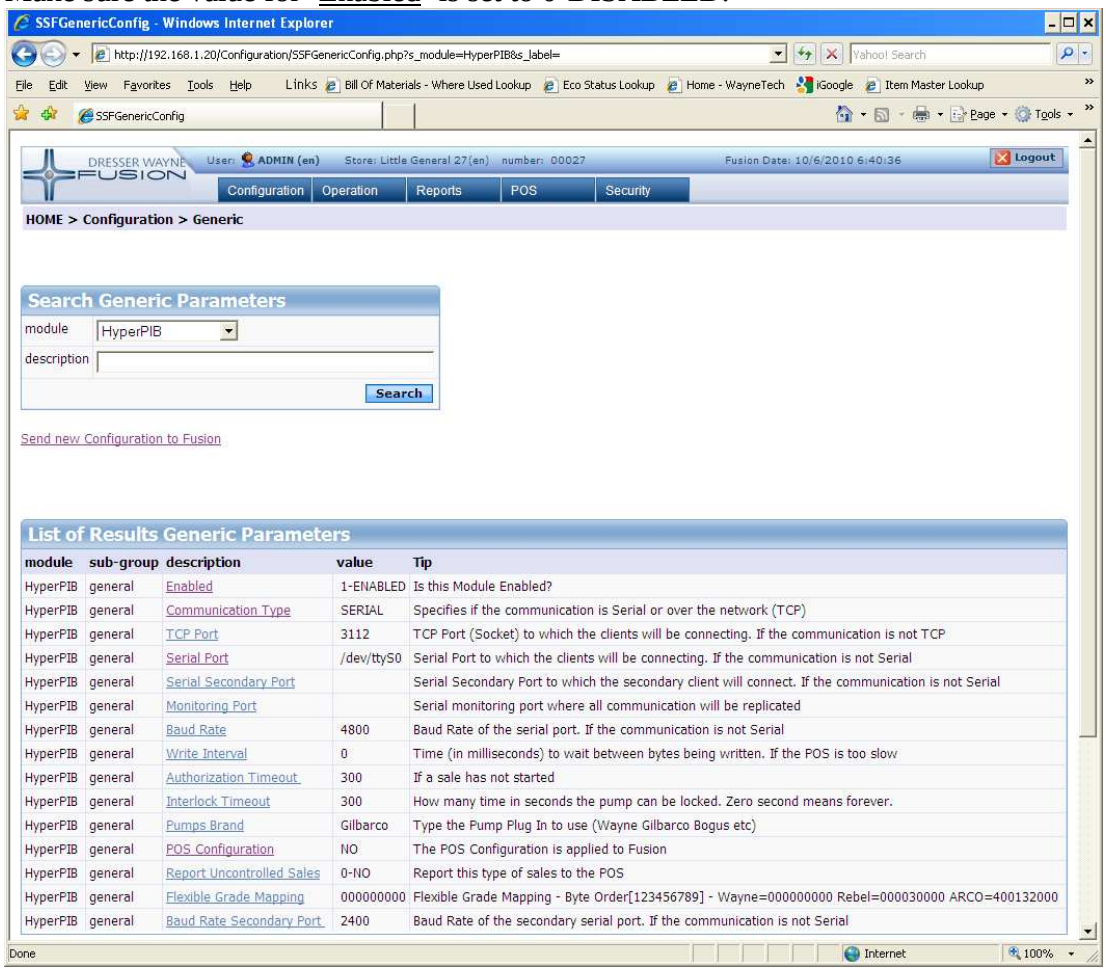


- Use the pull down to set the ‘Param Value’ field to blank and click on the Submit button.
- Click on the ‘Send new Configuration to Fusion’ link to update the configuration.
- Select ‘Close Windows’

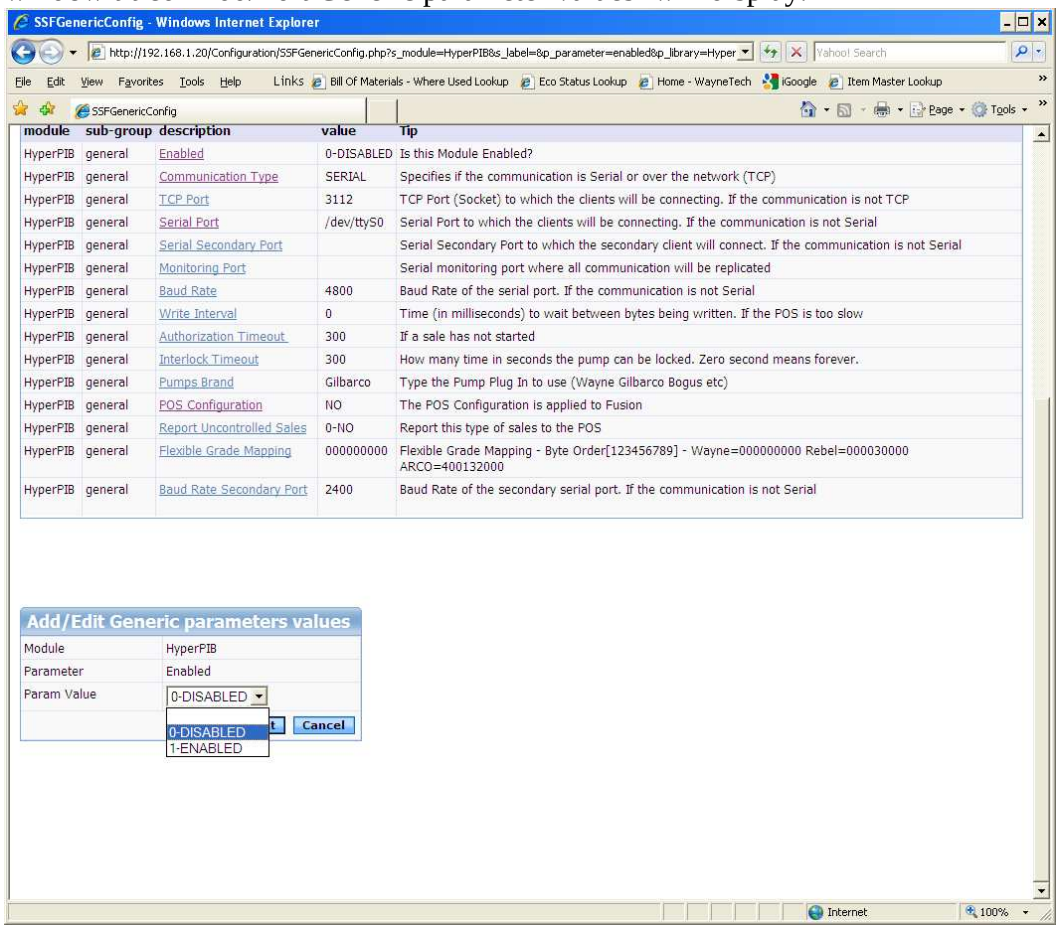


If the POS is using the PAM™ protocol, make sure that the HyperPIB interface is disabled.

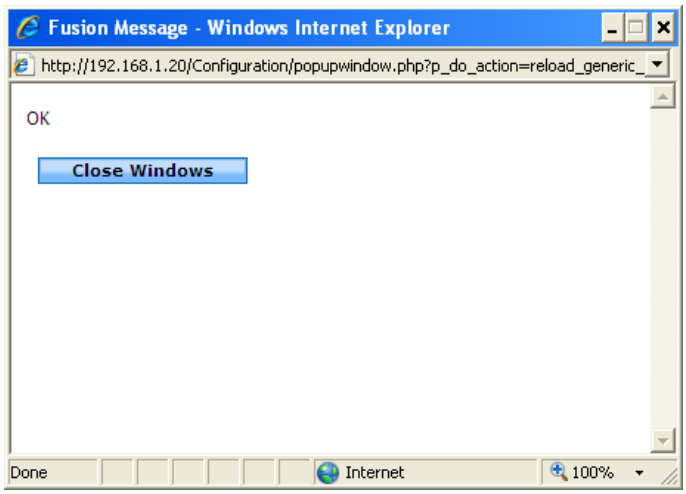
- From the Web Console, go to Configuration->Generic
- In the module pull down box of the Search Generic Parameters window, select HyperPIB and click on the 'Search' button.
- Make sure the value for 'Enabled' is set to 0-DISABLED.



- If this value is not 0-DISABLED, click on the ‘Enabled’ link, and a new window titled ‘Add/Edit Generic parameter values’ will display.



- Use the pull down to set the ‘Param Value’ field to 0-DISABLED and click on the Submit button.
- Click on the ‘Send new Configuration to Fusion’ link to update the configuration.
- Select ‘Close Windows’



10.2.4 Turn off POS Configuration

After completing the install and all pump configurations are completed, it is important to disable the 'POS Configuration' in the HyperPIB/PAM setup screen.
If you leave POS_Configuration set to YES, you will experience issues down the road when the POS system is re-sending the configuration.

Setting POS_Cnfiguration to NO will prevent a certain combination of the configuration commands in the HyperPIB protocol from triggering the Fusion to reload the pump configuration.
When Fusion reloads the configuration, all pumps and communication channels are deleted and then recreated, resulting in the forecourt to go offline for a couple of minutes.

Specifically, the changes blocked through this setting are related to the number of pumps, the blend ratio and the grade assignments to the hoses.
It does not prevent price changes or changes in service mode (Full-Serve, Self-Serve)

10.2.5 No pump communication

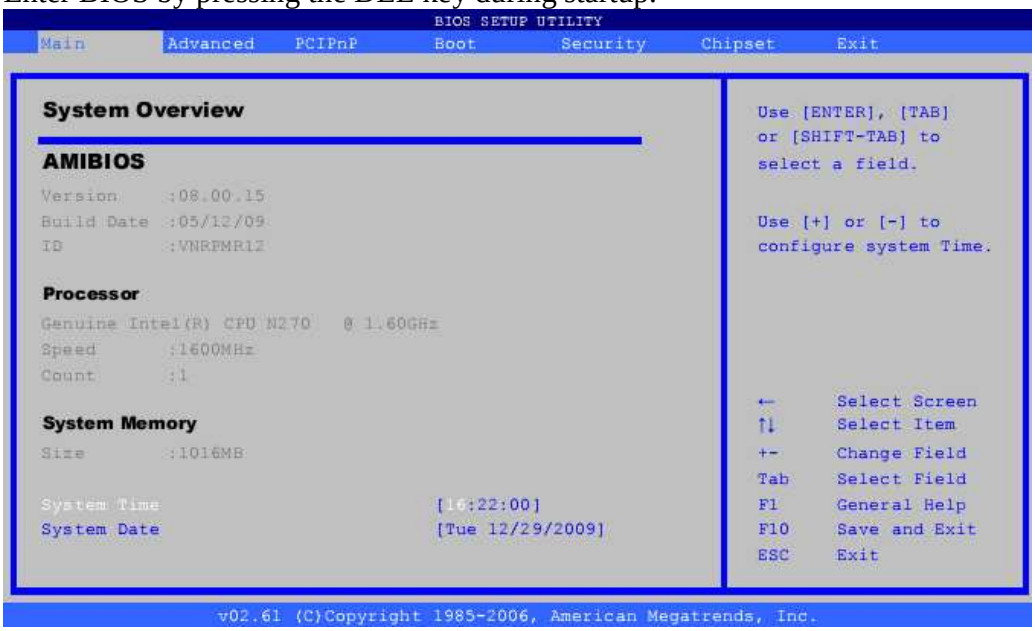
- Try to isolate the issue, start working with only one of the non working dispensers.
- Disconnect all pumps from the GRIB.
- Connect the wires of one dispenser to pin 1 and 4 of a Phoenix connector
- In Fusion programming, go to *Configuration->Devices->Pum*p and set all fueling points to use the same GRIB-board channel.
- Connect the isolated dispenser to that channel.
- Verify that the expected FP comes online through *Operation->Forecourt ->Current Status*. This will test if the wires actually belong to the pump ID that the ASO is expecting.
- If you do not get communication, reset all fueling points to use another channel and connect the pump to that channel. This will test if the first channel used might be defective and requires replacement of the GRIB board.

10.3 Fusion Gateway

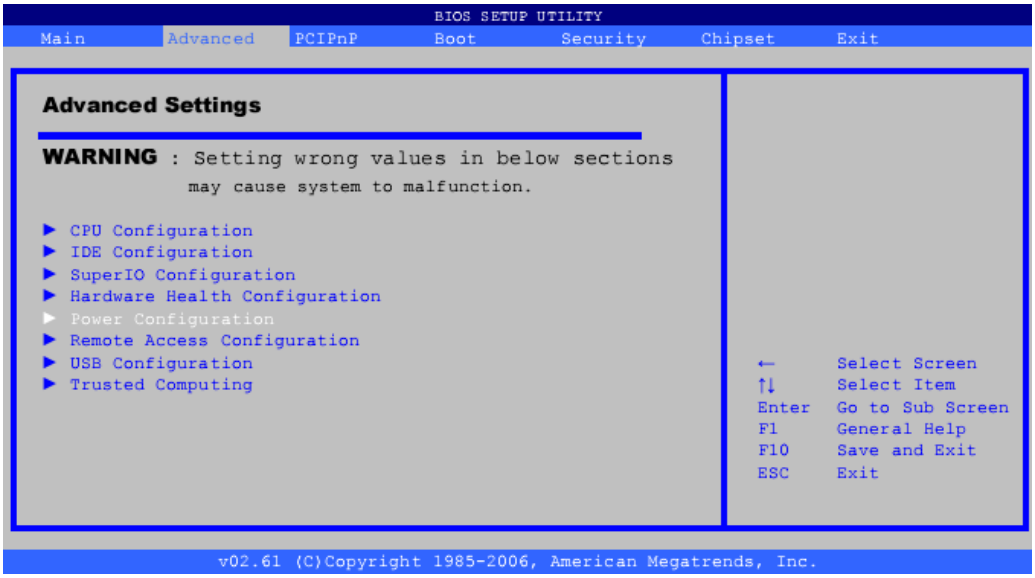
10.3.1 Gateway not shutting down

This is actually true for all Fusion configurations that run the Windows Operating system, but in the US that is only the Gateway at this time. In addition, Europe has configurations that run on Windows.
This change is required for the shutdown feature to work properly.
In addition to these BIOS setting you need a latest revision of the CUPS board and a custom cable (WU003013-0001) to replace the WU001269-0001 cable.

Enter BIOS by pressing the DEL key during startup.

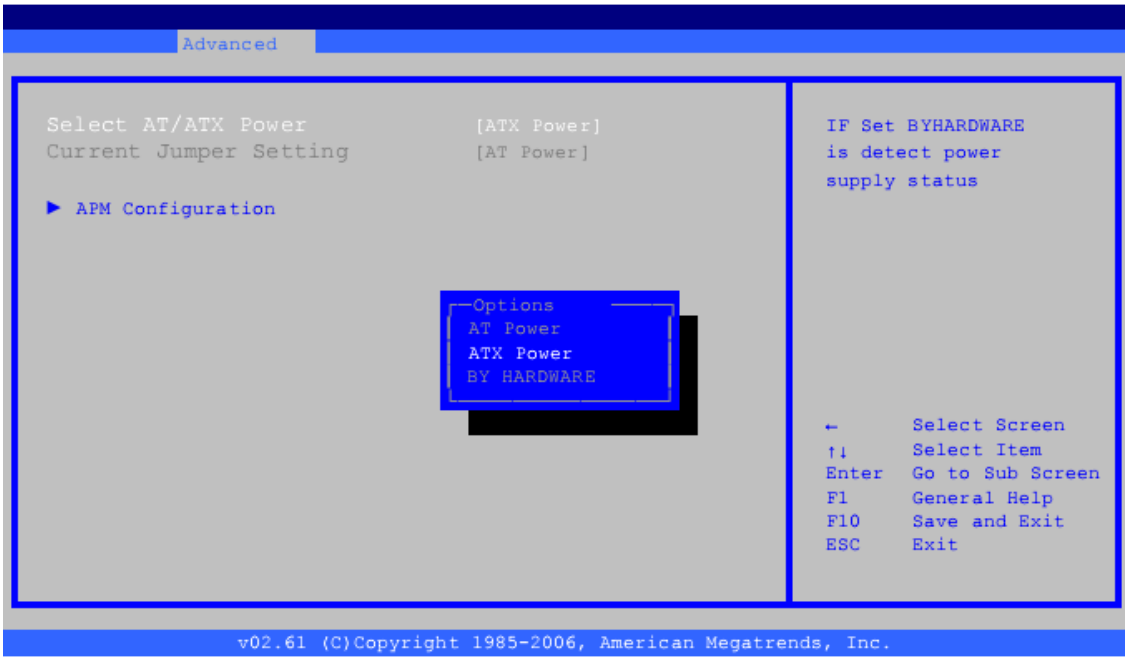


Go to the Advanced tab and Select Power Configuration



Under Power Configuration go to Select AT/ATX power

Set this setting to ATX Power



Note that all Fusion SBC boards are defaulted to AT Power. Do not change this setting for any of the Fusion systems that are running Linux. This must be set to AT Power for Linux.