

SMARTPIT VERSION 2.3.7.2

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VERSION HISTORY

New Features in SmartPIT version 2.3.7.2 - 09/04/2009

1. Support for Aloha data format to all end devices (Rapid Eye, HRXD, IDM-Serial and IDM-MRSP)
Following cosmetic modifications
 - IDM Interface device name has changed to IDM-Serial
 - MRSP Interface device name has changed to IDM-MRSP
2. Support for directly package the filtered data and send as TCP packet over Ethernet
3. Configurable option of OSD Clear Time support
4. Following Smart Data Filters are added with Master filter file
 - Fujitsu filter
 - Micros Subway pole filter
 - HL-till-version filter
 - Samsung 6500 II filter
 - Weight scale filter
 - AlohaSpy filter
 - Truck Axle Weight filter
 - Serial ATM filter
 - SeeLane filter
 - USPS_Master_Filter
 - WayneNucleus_HRXD

New Features in SmartPIT version 2.3.7.1 - 9/1/2008

1. OSD Font option support
2. Software upgrade - Application tab set as default

New Features in SmartPIT version 2.3.7 - 8/18/2008

1. Pole Watcher – banner ad removal post filter support.

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2. Live data support for SmartData filter application.
3. Multiple ECR SDF application – 2 Serial input and 1 output.
4. Hex format (<<0x00>>) display support in Edit SmartDataFilter page.
5. OSD clear screen time form 30 seconds to around 5 seconds.
6. HRXD/HRSD Port information – to display the “Port NO” along with the transaction line.
7. OSD text color option – Black or White.
8. Displays date & time in Log messages.
9. Added the 3 more filters with master filter file ‘SmartFilters.tar’.
10. Following cosmetic modifications
 - a. Following text to be displayed when the user click Live data link for applications other than SmartDataFilter

application. “Currently only the SmartDataFilter application supports streaming of Live data. To change the application in the

SmartPIT Web client, go to common configuration-general settings.”

b. The following text to be displayed at the bottom of the live data window for user notification. "Note: After

approximately 18 minutes of inactivity the SmartPIT configuration screen will logout. You will not be able to change Show

non-printable characters in Hex. To change these, close Live data view, log back into SmartPIT and open Live data view.”

c. Login redirect text changed from "redirecting in x seconds" to “You can try to log in again in x second(s)” when the

second user try to login.

d. Move the download button to top in capture and filter download dialog box.

e. Move the Edit button and Save, Cancel and Reset buttons to top in configuration page.

New Features in SmartPIT version 2.3.6.1 - 7/2/2008

- =====
1. ATM Blank space removal

New Features in SmartPIT version 2.3.6 - 5/26/2008

- =====
1. Diebold security fix for the following
 - NMAP scan to mention all ports as closed
 - Nessus scan to pass Infinite HTTP request.
 2. Clearing OSD screen when idea for 30 seconds.

New Features in SmartPIT version 2.3.5 - 4/16/2008

- =====
1. Blue board OSD dots issue fix with new FPGA file
 2. Cosmatic changes
 - Default configuration changed.
 1. SmartDataFilter configurations page : Output format set to "HRXD/HRSD"
 2. Common Configuration page: Display Option set to "None"
 3. Common Configuration page: Port 1, Port 2 and Port 3 set to 9600 BPS
 - Add following filters to SmartDataFilters.tar
 1. VerifoneTopazVirtualJournal.flt
 2. Fujitsu2000IBMSuremark4610Printer.flt

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3. Generic.ftl
4. flt_MaitreDMultiplexedPOSDDataToRE.ftl
- Following text change in the UI:
 1. "List Of Files" to "All Files".
 2. "Data/Time Settings" to "On Screen Display Date/Time Settings". LCD
 3. "Filter name" to "Sub filter name" in EDIT sub filter screen
3. Default filter replaced with Generic filter. So that when the default filter files is in use, the new generic filter sub-filters will be

applied.

4. String table entry removal in code "NewLine"
5. UP/Down arrow key change.
6. Re locate Pre-Filter selection window.

New Features in SmartPIT version 2.3.4 - 2/22/2008

- =====
1. Display boot up indication on LCD.
 2. Front Panel Password Reset by pressing left key.
 3. Text changes. – Common configuration and SmartDataFilter configuration.
 4. Default Changes - SmartDataFilter and ATM configuration.
 5. Add "New" button next to load.
 6. SmartDataFilter - new Actions.
 - a. Recognize \$1.11 or ?1.11 as number with Point
 - b. Find and replace characters.
 - c. Apply filter on saving.
 - d. Right align numbers and left align numbers.
 - e. Insert 'n' previous space char
 - f. Insert 'n' next space char
 7. Build number display in "About" window. – This is used as an identification of the build.
 8. LCD logout automatically if inactive time is more than 5 min.
 9. TX and RX lights to blink on data in data out. – The LED is made to flash when data is transferring and turn off when there is no

data with a delay of 2 seconds.

10. Filtered POS data sent out by Ethernet to destination IDM residing on Fusion in MRSP format.
11. Link to SmartPIT HVS SmartPIT Web page and SmartPIT Software upgrade page in "About" window.
12. Insert 30 sec (approximately) delay in-between ATM transactions packets and SmartDataFilter capture files play in simulation

mode.

13. IE V7 Support by SmartPIT web browser.

New Features in SmartPIT version 2.3.3 - 1/6/2008

- =====
1. Logout on closing browser with reduced mandatory wait time of 46 seconds on immediate reconnect. Incases of closing the browser after uploading firmware/application or applying filter in the web interface by clicking Refresh, the

mandatory wait time is around 4 minutes on immediate reconnect.

Incase of iBus parallel upload operation, the wait time is set to around 15 minutes as the firmware upload to dome may take around

10 minutes.

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New Features in SmartPIT version 2.3.2 - 12/20/2007

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1. Support for RS422, RS485 Sniffer for SmartDataFilter application. In case of RS485 a 'Y' cable is necessary for Sniffing

operation.

2. In addition, a work around for the feature - logging out on closing IE is provided as a user indication with a count down value. This

shall be taken care in the next release.

New Features in SmartPIT version 2.3.1 - 11/2/2007

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1. Factory Default on PORT 2 is changed to DCE.

2. The text "Filter" in the "Edit SmartDataFilter" web page is changed to "Sub Filter".

3. The height of the popup dialog which is used to add the filter is increased to display Save and Cancel button.

4. The Open button operation is changed so that it only opens a capture file and does not apply any filters to the capture file even if

they are displayed in the filter window.

5. When the user clicks the Edit SmartDataFilter tab the screen is made not to display any capture file data. If the user selects a

capture file then clicks open then the capture file is made to open but filters will not be applied.

6. The capture file size of SmartDataFilter is reduced size of capture files from 20KB to 4 KB to improve the performance as

required.

7. TM symbol is added to screens -----SmartPIT™.

8. ATM transactions are made to be overlaid on the OSD screen.

9. A user input option is provided for getting the user defined register number that will be used to communication with IDM. The IDM

register number is saved in the memory.

FEATURES IN THE RELEASE

The release provides the following applications support:

- 1. RetailPIT - Used for recording transactions of the Retail POS system.
- 2. AtmPIT - Used for recording transactions from the ATM counter.
- 3. SmartDataFilter - Used for recording transactions of serial POS systems with filters configured using SmartDataFilter application.
- 4. SmartDataFilter(web) - Web based configuration of serial POS systems data
- 5. MultipleECR SDF - Used for 2 ECR support in SmartDataFilter.
- 6. Internationalization - Multiple language support.

formatting

Configurations can be modified using the LCD menu or through the web browser.

STEPS TO INSTALL THE APPLICATION

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1. Connect the BDM cable to the NetCore and power up both BDM and NetCore.
2. Run the ColdFire Programmer. Give OK in the Connection Assistant with default options.
3. Select the "AA_MBM650_w.CFP" programming algorithm in the following dialog.
4. Provide the Base Address as "FF000000".
5. Erase the Flash memory by selecting Program->Erase Module.
6. After the module is erased select File->Specify S Record and choose bootloader.s19.
Select Program->Program Module. After programming is complete, disconnect the BDM cable.
7. Configure the PC with static IP address of 199.63.24.62
8. Run the tftpd32 application and set the directory to the folder containing the release files.
9. Connect a cross-ethernet cable from SmartPIT to the PC.
10. Power-up the board.
11. Wait for the LEDs to glow sequentially. The application is programmed. Restart the system.
12. If the LEDS blink simultaneously three times and stop restart the system and try again.

USING THE WEB-BASED CONFIGURATION UTILITIES

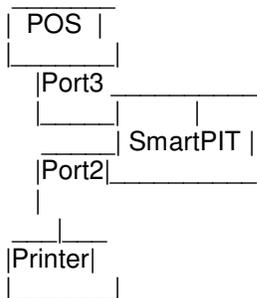
1. After the rebooting is complete enter "http://192.168.10.153". (The IP address can be changed using the LCD menu).
2. In the login page, enter "smartpit" as username (without the quotes) and "password" as the password.
3. The various menus displayed above provide options for configuring the system.

USING THE SMARTDATAFILTER WEB CONFIGURATOR

The SmartDataFilter configurator provides a method to seamlessly interface any serial cash register to an end data management solution.

To configure the SmartDataFilter:

1. From the "Common Configuration" under "Configuration" tab select the Edit button.
2. Select the Application as "SmartDataFilter"
3. Select the "Operating Mode" as "Capture"
4. Save the configuration.
5. Connect the POS terminal to the SmartPIT as shown



6. Run some transactions from the POS terminal.
7. The transactions are saved.
8. Open the web-browser and select "EDIT SMARTDATAFILTER" from the menu.
9. From the list of capture files, select the file with the largest index. (Capture files are serially numbered as CaptureFile0, CaptureFile1.
10. Choose the filter from the filter dropdown and select Apply.
11. Select the Open button to see the captured file.
12. Add more filters to the list using "Add" option. Under the add filter popup the following have to be added.
 - a. Enter a name of the filter which can be used for identifying the filter.
 - b. Add one or more conditions which have to be evaluated one after another for the filter to be applied.

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The conditions are evaluated sequentially such that the second condition starts checking from the end

where the first condition was true.

c. Add one or more actions indicating what the filter is expected to do.

Each action is sequentially applied on the place where all conditions have evaluated to TRUE.

13. Select "Save" once the filter has been appropriately defined and Press Refresh button to see the filtered output.
14. Repeat the steps for each of the filter required.
15. Save the filter by selecting "Save" button
16. Now the filter is ready to be used
17. From the "Common Configuration" under "Configuration" tab select the Edit button.
18. Select the Application as "SmartDataFilter"
19. Select the "Operating Mode" as "Real time"
20. Save the configuration.
21. From the "SmartDataFilter" under "Configuration" tab select the Edit button.
22. Select the "Filter file" as the filter file saved.
23. Save the configuration.
24. The application is ready.

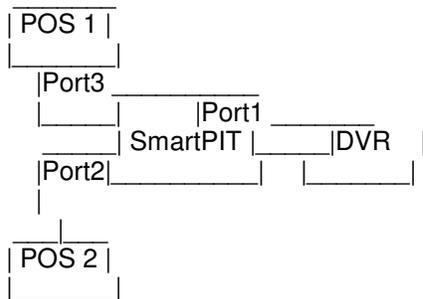
USING THE MULTIPLE ECR SDF WEB CONFIGURATOR

The MultipleECR SDF configurator provides a method to seamlessly interface any 2 serial cash register to an end data management

solution.

To configure the MultipleECR SDF:

1. From the "Common Configuration" under "Configuration" tab select the Edit button.
2. Select the Application as " MultipleECR SDF"
3. Select the "Operating Mode" as "Capture"
4. Save the configuration.
5. Connect the POS terminal to the SmartPIT as shown



6. Run some transactions from the POS1 and POS2 terminals.
7. The transactions are saved.
8. Open the web-browser and select "EDIT SMARTDATAFILTER" from the menu.
9. From the list of capture files, select the file with the largest index. (Capture files are serially numbered as

Port2_MSDFCapFile0 to Port2_MSDFCapFile5 and Port3_MSDFCapFile0 to Port3_MSDFCapFile5 for POS1 and POS2

respectively.

10. Choose the filter from the filter dropdown and select Apply.

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11. Select the Open button to see the captured file.
12. Add more filters to the list using "Add" option. Under the add filter popup the following have to be added.
 - a. Enter a name of the filter which can be used for identifying the filter.
 - b. Add one or more conditions which have to be evaluated one after another for the filter to be

applied. The conditions are evaluated sequentially such that the second condition starts checking from the end where the

first condition was true.

- c. Add one or more actions indicating what the filter is expected to do.
Each action is sequentially applied on the place where all conditions have evaluated to TRUE.
13. Select "Save" once the filter has been appropriately defined and Press Refresh button to see the filtered output.
14. Repeat the steps for each of the filter required.
15. Save the filter by selecting "Save" button
16. Now the filter is ready to be used
17. From the "Common Configuration" under "Configuration" tab select the Edit button.
18. Select the Application as " MultipleECR SDF"
19. Select the "Operating Mode" as "Real time"
20. Save the configuration.
21. From the " MultipleECR SDF" under "Configuration" tab select the Edit button.
22. Select the "Filter file" as the filter file saved.
23. Select one of the interface device
 - Rapid Eye: POS1 and POS2 transaction will be displayed in corresponding POS window in the RapidEye based on the Port2

and Port3 Register numbers. A serial connection needs to be made from PORT3 to Rapid Eye.

- HRXD/HRSD: The output will be "Port No" followed by the transaction. Port number will be taken from the corresponding Port2

and Port3 register numbers. A serial connection needs to be made from PORT3 to HRXD/HRSD.

- IDM-Serial: Each POS data will be displayed in corresponding terminal in the IDM based on the Port2 and Port3

registernumbers. A serial connection needs to be made from PORT3 to IDM PC.

- IDM-MRSP: Each POS data will be displayed in corresponding terminal in the IDM based on the Port2 and Port3 register

numbers. The network IP and IDM MRSP port number needs to be configured in SmartPIT configurations.

24. Select the one of the OSD output port.
25. Enter the 'Port2 Reg No' and 'Port3 Reg No' for corresponding POS terminals.
26. Enter the 'IDM Server IP' and 'MRSP TCP Port' for MRSP end device if necessary.
27. Save the configuration.
28. The application is ready for operation.

USING THE CONFIGURABLE OPTION OF OSD CLEAR TIME

1. The OSD Clear time configuration option is available in web page under 'Common Configuration - On Screen Display & Date/Time

Settings'. This option is used to clear the OSD screen when no data is updated on the OSD with in specified duration.

2. The clear time duration needs to be entered in seconds.

3. The accepted range is between 1 to 1800 Second(s) (1 second to 30 minutes).

USING THE SYSTEM ADMINISTRATION TAB

1. Different option are provided for firmware upgrade.
2. The first option "Configurations" is used for uploading configuration files.
The configuration files can be uploaded only in tar format. The tar format of the configuration files can be downloaded using the download option.
3. The second option is to upload the filter files. The filter files can be uploaded either in tar format or just as a single file. In case of tar format the only the filter files that are with extension *.flt will in uploaded.
The same goes for a single file also.
4. The third option "Captures" is for uploading the capture files. Any file format can be uploaded using this option, but the files will be treated as SmartDataFilter capture files and renamed accordingly.
Other capture file for Retalix and ATM have to uploaded using "Application" tab. The capture files can be uploaded in tar format also.
5. The last option "Application" is for uploading application files (exe) and language files (lng).
Other files can also be uploaded using this option, but the files must not be already present in the SmartPIT.
Uploading files in tar format replaces the existing files with the files in the tar, if the same exists.
6. The "Download" section provides options for downloading filter files, capture files and log files.
7. For deleting the configurations, filters and capture files select the appropriate check box and click Delete button.
All the capture files will be deleted if the "Capture files" option is selected.
8. The factory defaults can be restored by clicking "Restore Factory Defaults" button present in Other options in this tab.
9. The board can be reset remotely using the "Restart System" button.

USING THE STRING CONVERTER TOOL

1. The string converter tool is a windows thick client that is used to create language files for SmartPIT.
2. Install the application by running the setup.
3. After installing, launch the application using the desktop icon or by using the short cut at
AllPrograms->Honeywell->String Converter->String Converter.
4. A dialog box appears asking for Source and Target language. Choose source language as the Lang_Eng.lng provided
with the release and the Target language name as the Language which is going to be added (Ex: Spanish).
5. In the following dialog box choose YES if you want to check if the Target language is supported by OSD or LCD.
If the check is not necessary, choose NO.
6. In the following dialog box the target language strings can be chosen in the left pane and the text can be entered in the bottom text box. The "Change and Next" button can be clicked to modify the next string.
7. The target file can be saved by clicking the save button. The language file must have the prefix Lang_ and the extension .lng for SmartPIT to identify the file.
8. To Copy and paste the text click "Shift+Ctrl+C" and "Shift+Ctrl+V".
9. The strings referred with the following index should be satisfied the following criteria .
The individual parameters have to be treated as separate strings and the number of parameters to be maintained respectively.

String Table Index	No of parameters (comma separated)
505	-4
519	-5
520	-5
521	-6
522	-5

NOTES

1. COM2 when configured for CPU UARTA prints debug messages in HyperTerminal at 9600-8-N-1 baud. When Restore

factory default settings applied initial debug information will come only in DTE cable. After that PORT2 settings will be changed to

9600bps - 8-N-1 and DCE. We must change this to 9600-8-N-1 and DTE or DCE based on the cable connected.

2. When setting the IP address of the board ensure that all three values IP, Gateway and Subnet Mask are set.

3. The value of Date ranges from the year 2000 to 2036.

4. When specifying IP for ATM application in the web, do not include space at the end.

5. SmartPIT web applications are compatible with only Internet Explorer Version 6.0

6. In SmartDataFilter application with capture mode, the capture files are stored in cap_CaptureFile0.cap to

cap_CaptureFile5.cap. If the last capture file(capture file 5) is full, then the capture file 5 will be deleted and overwritten. The

capturing sequence will not be cyclic. If we are changing any configurations while the data is captured in capture file 5, then the

capture file would be deleted and over written.

7. The "NewLine" filter in SmartDataFilter must match properly with the input transaction data.

8. If the IE is closed with out logging out and when a new IE is opened immediatly, the login page redirects in 46sec max

to enter username and password.

9. If there is no user activity, the system would logout in/around 18 mins. While uploading firmware the logout timer reset

to 6 min and so if the browser is closed without proper logout, then it would take maximum of 6 minutes to login.

10. When you upload the latest version(Ex: 2.31) on to ealier version(Ex: 2.3), same configuration will be maintained. If you

upload ealier version(Ex: 2.3) on to latest version(Ex: 2.31), factory default needs to be restored.

11. The file system size in SmartPIT is 6 MB. The memory occupied by all the factory default files including the SmartPIT.tar,

SmartFilters.tar and FPGA bit file is approximately 2.5 MB. If a file is uploaded more than the file system free space, an error

message would be shown. Under this condition, the file size needs to be reduced.

12. The LED at the back of RJ45 connector, blinks when transmitting and receiving data with a delay of around 2 seconds. In

SmartDtaFilter application, in sniffer loop back mode, the PORT2 LED shall not blink as the data is looped back in the FPGA.

13. Real time clock need to synchronize, if Netcore board is removed and placed back. Otherwise it would show junk display

14. The capture files in the ATM application are captured with file starting from 1 to 5 and recycles. This capture operation is

irrespective of the capture files uploaded from System Administration page.

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15. ActiveX component need to be install and do the corresponding settings in IE to view the Livedata feature in Smartdata filter

application.

16. SmartPIT takes further 5 seconds after showing redirecting in 1 min while restarting based on network traffic.

17. Live text window null char has been displayed as <<0x00>>.

18. Multiple ECR SDF Capture mode it shows Capture Started for Port2 even if the jumper settings in debug mode. This is

hardware limitation.

19. Open and close the Live text window continuously for more than 40 times web server might hang. Need to restart the

SmartPIT.

20. Multiple ECR SDF capture files are download form SmartDataFilter Capture link.

KNOWN ISSUES:

1. SmartPIT when interfaced to IDM automatically sets COM settings to RS232 9600-8-N-1.

- If you switch between the different Application or different Interface device, you must restart the IDM server for

re-connecting.

- IDM will automatically re-connect with out restarting the server, only if COM1 baud rate is set for 9600-8-N-1.

2. Extended ASCII support for input data in SmartDataFilter may not be displayed properly at IDM.

3. The clock may have a minute delay for a period of one month. Synchronizing the clock will solve the issue.

4. While downloading the files, if any of the files are not downloaded properly, download the entire tar file and extract the same file from the tar.

5. If HTML code is directly displayed in the IE window, refresh the page to get the display proper.

6. Few strings are duplicated in the language file, so changing a string at one location in the file may not reflect at all UI

locations.

7. SmartDatafilter- Capturing the data & over writing the capture 5 affecting the web browser. When a large capture file is

being processed the web page may display page in a distorted manner

– Choose smaller capture files or define effective filters.

8. SmartPIT did not boot properly once when the power connector was unplugged due to loose connection and after

reconnecting back. The SmartPIT can be brought back up by uploading SmartPIT.tar through TFTP.

9. If the IDM MRSP IP or Port number is not configured properly or IDM MRSP server is not reachable and when SmartPIT

is left for around 10 minutes, SmartPIT web borwaser may not be accessable. SmartPIT needs to be re-started manually and the

configuration needs to be set properly.

10. When upload the tar file in the system administration page, "Page cannot be displayed" error was shown once. This

error may be due to network errors. In such cases, delete the SmartPIT.tar file from goforms/upldForm page and restart the board

and try again. If the error repeats use a cross over network cable for uploading the firmware.

11. While adding filter conditions in "Edit SmartDataFilter" page-"Add Filter" dialog, an improper condition like

"<<0x0x>><<0x0>>" may give false values.

12. While MRSP data is displayed in the live data, accessing web UI get delayed.

13. When Multiple ECR SDF application is used and the jumper setting on the hardware is connected to debug setting,

the debug information are reflected back and seen at PORT1. This occurred in only one of the two production netcores.

14. When the IE shows script error with 'An error has occurred in the script on this page' Click Yes to close the debug

message and continue the operation.

15. In the application: SmartPTZ

- While doing 1-1 upload/Config download....there is latency in PTZ operation.
- The progress/completion of the firmware upload or configuration upload/download is not displayed in the web browser. [User has to checkout the same in the CCTV monitors or from the DBUG port Trace messages]
- In the operation of firmware parallel upload, the SmartPIT will not respond (likely not to do) to other operations (except canceling the same from web interface).....until it completes. Cancel operation is necessary if the user wants to stop the task in case of firmware version mismatch.
- Web page Refresh (F5) may be needed to get the actual display and values.
- In the operation of PAN/Tilt/Zoom all in parallel.....sometimes the VideoBlox system is not sending the zoom stop command. This is differed from the SmartPIT scope.
- Preset mapping to invoke special functions has not been included. The same feature shall

be

enabled from the ACUIX dome in the next release [ACUIX Release 2.2].

Currently it shall continue to do the Recall presets respectively.

- PT operation from the arrow keys in the PCK keyboard is not supported.
- There may be latency in the PTZ operation when more than one user controlling domes from different keyboards through the same SmartPIT.

TROUBLESHOOTING SMARTPIT

A. The output is not seen correctly on the HyperTerminal.

a. Check if the cable used is the correct cable.

If the port is configured as DTE a cross-over cable must be used.

b. If using PORT2 check if the Jumpers are correctly connected and set the baud rate to 9600-8-N-1. Connect cross cable or straight cable based on the PORT 2 setting as DTE or DCE.

PORT settings will be applied to the port only based on the selected applications slave port.

c. Check the Serial Port settings used in HyperTerminal.

d. Check if the Slave Port Menu under Application menu is configured correctly.

e. The FPGA bit file may not match the NetCore Revision or the board.

Choose the appropriate bit file based on NetCore revision and reload it.

f. Unplug and plug the cable back and try.

B. The web-browser is not able to open the home page of SmartPIT board.

a. The board uses a default IP of 192.168.10.153 with Gateway address of 192.168.10.1

If necessary change this IP address using LCD configurator to

a free IP available with the corresponding gateway.

b. If proxy settings are enabled ensure that the IP is accesible behind a proxy.

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- C. The web applications are not working as expected.
 - a. Check if the browser is Internet Explorer and browser's version is 6.0
- D. BootLoader does not program correctly.
 - a. Check if tftp server IP address is set correctly.
 - b. Ensure tftp directory is set correctly.
 - c. Ensure network connection from tftp server to SmartPIT.
- E. Web is not displaying the pages correctly.
 - a. Delete the old temporary internet files.
 - b. Refresh the web page. Click (Ctrl+F5) to refresh the page.
 - c. Reset the IE settings to default and try

END OF README
