

Pegasus Application

SMT8036E

SUNDANCE MULTIPROCESSOR TECHNOLOGY LTD.

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc		
Date	27/11/2003	Revision	1	Page	1 of 11

Revision Record

Revision	Date	Change	Initials
1	10\06\03	Original Document	E.A.

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc
Date	27/11/2003	Revision	1
		Page	2 of 11

Table of contents

1	Comments.....	4
2	Pegasus Application: description.....	4
3	Hardware Installation	5
4	Software Installation.....	7
5	Pegasus Application.....	8

Table of figures

<i>Figure 1: Block diagram of the Pegasus Application</i>	<i>4</i>
<i>Figure 2: ComPort connection, TIC0<->T3C3;.....</i>	<i>5</i>
<i>Figure 3: SHB connections:.....</i>	<i>5</i>
<i>Figure 4: The Pegasus Application running</i>	<i>9</i>

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc	
Date	27/11/2003	Revision	1	Page 3 of 11

1 Comments

This Pegasus Application is working on **Windows 2000**.

The [SMT6300](#) from Sundance should be installed on the machine on which the application is going to run.

2 Pegasus Application: description

The following Pegasus application is implemented on a [SMT365E](#). During the initialisation the [SMT370](#), which are FPGA board, are configured. Then a signal is send to the [SMT370](#) used as a pattern generator.

On the [SMT370](#) the DACs output the signal to the ADCs. Then the signal goes to the [SMT365E](#) via the SHB.

The [SMT365E](#) read continuously the data on which a 10-point FFT is performed for each 1024 samples received. Then the data is sent to the PC where the result of the FFT is displayed in real time on the screen.

The **Figure 1** represents the block diagram of this Pegasus Application.

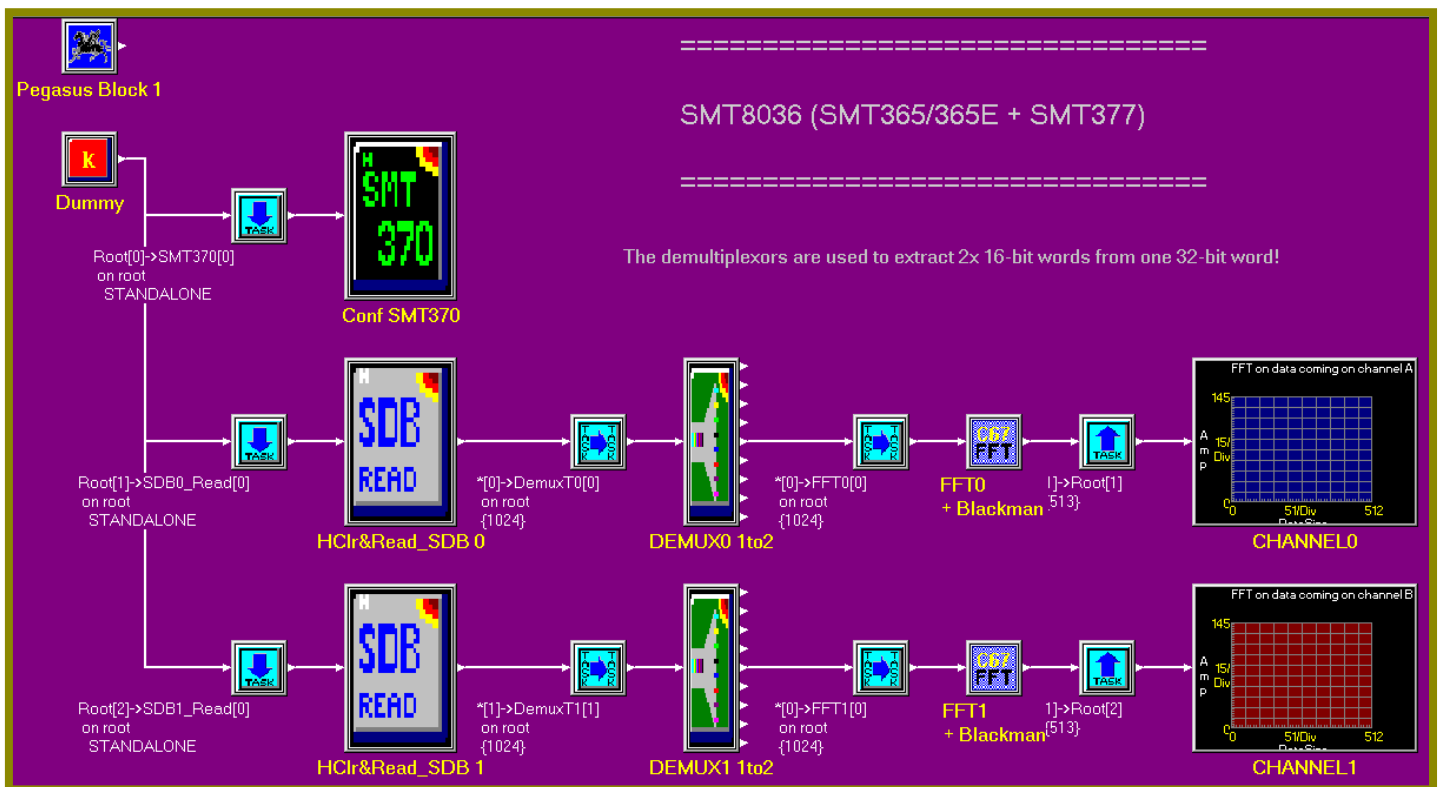


Figure 1: Block diagram of the Pegasus Application

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc
Date	27/11/2003	Revision	1
		Page	4 of 11

3 Hardware Installation

The hardware configuration is the one for the SMT8036E system. For more information see the [SMT8036E User Manual](#).



Figure 2: ComPort connection, T1C0<->T3C3;

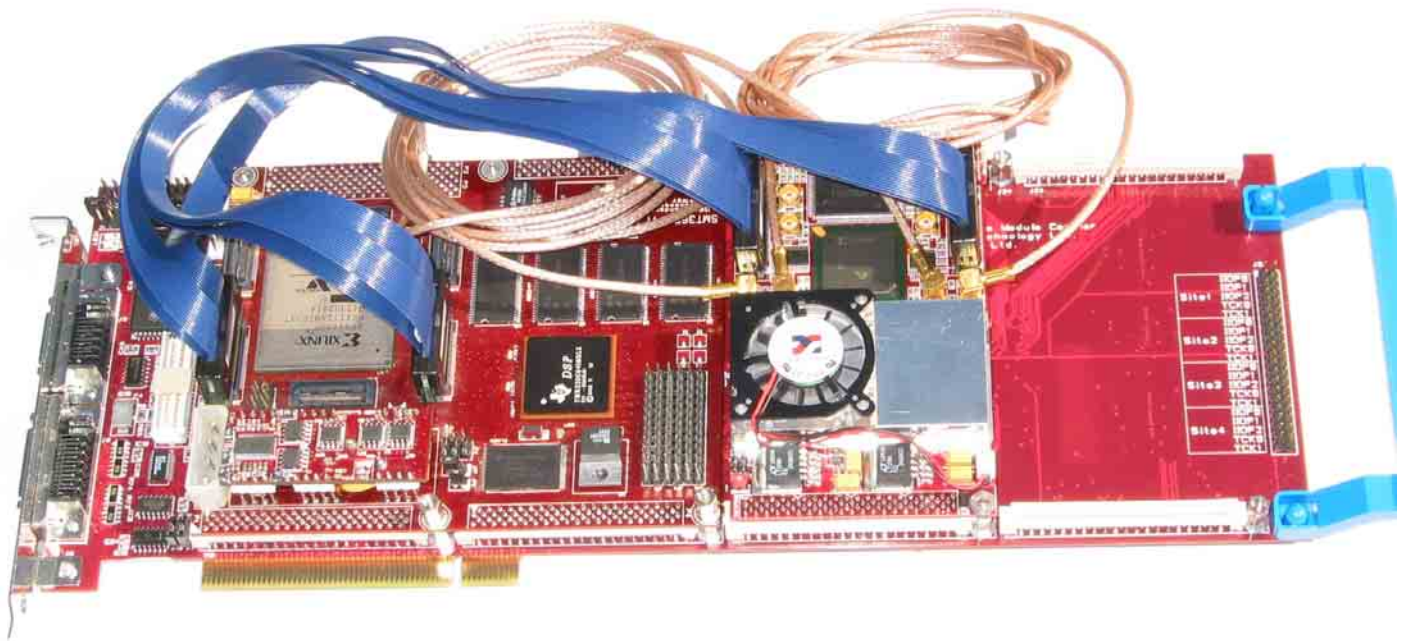


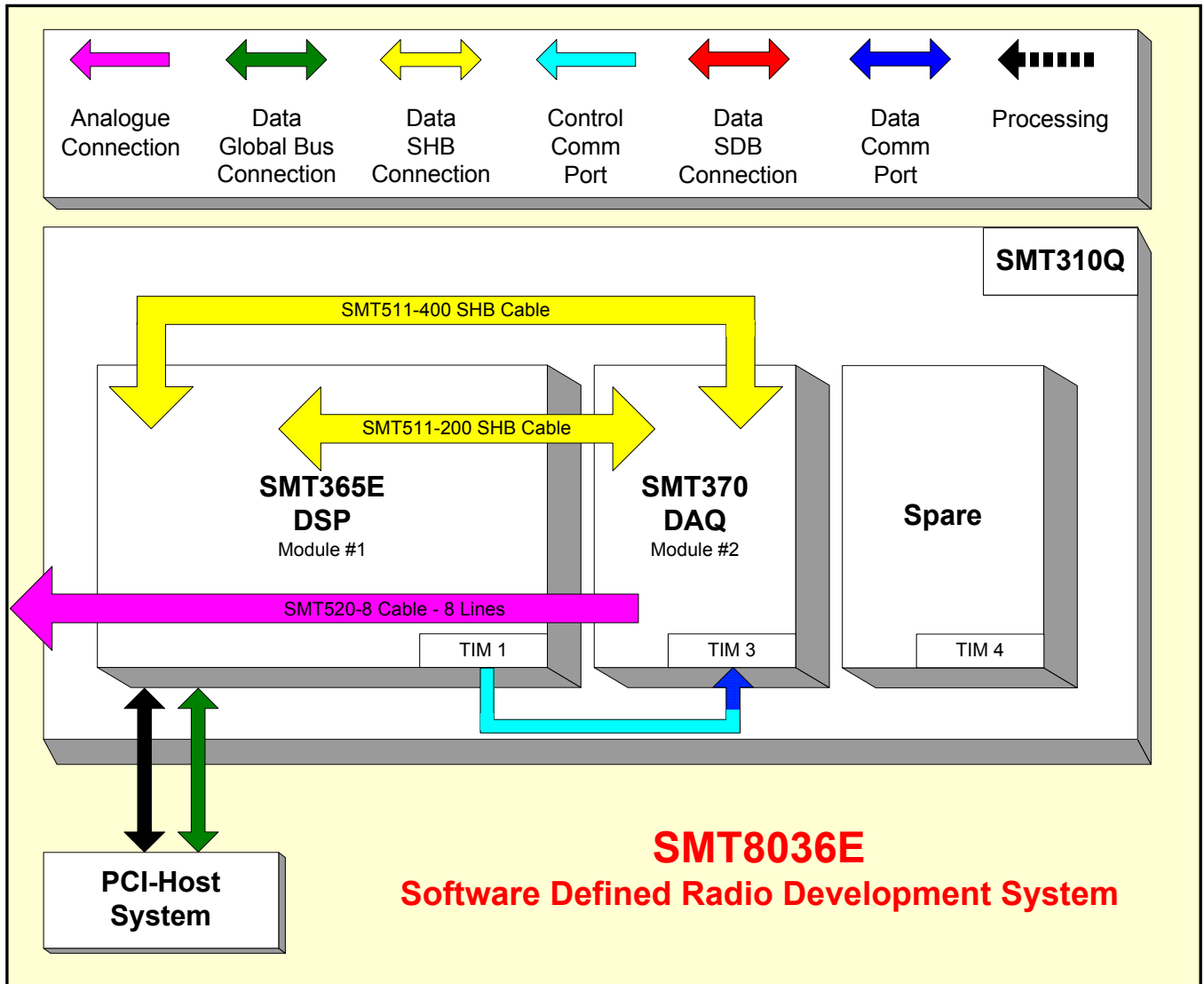
Figure 3: SHB connections: SHBB (365E) <-> SHBA (370)
SHBA (365E) <-> SHBB (370)

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc
Date	27/11/2003	Revision	1
		Page	5 of 11

DAC and ADC connections: J12 <-> J10
 J13 <-> J9.

Architecture

The following diagram shows the architecture of the SMT8036E system:

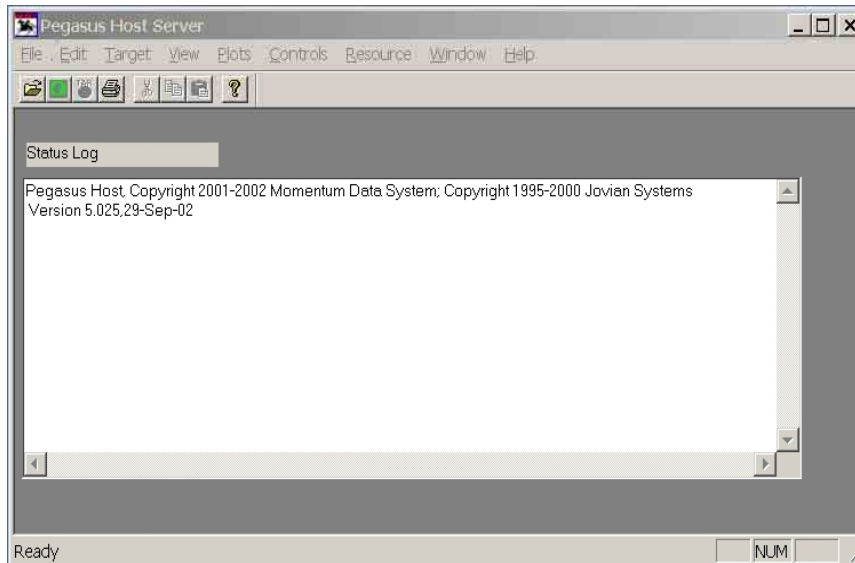


:

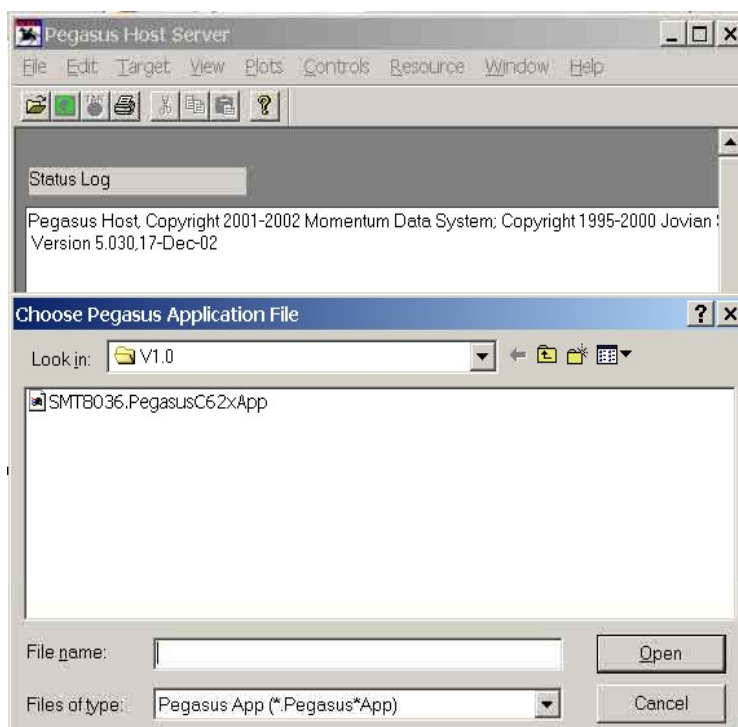
Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc		
Date	27/11/2003	Revision	1	Page	6 of 11

4 Software Installation.

1. Unzip SMT8036V1_0.zip in a folder MyFolder (for example) in your drive directory.
2. Go in \\MyFolder and open **PegHost.exe**. A window named "Pegasus Host Server" should open



3. Go in **File** -> **open** and browse to \\MyFolder\SMT8036.PegasusC62xApp



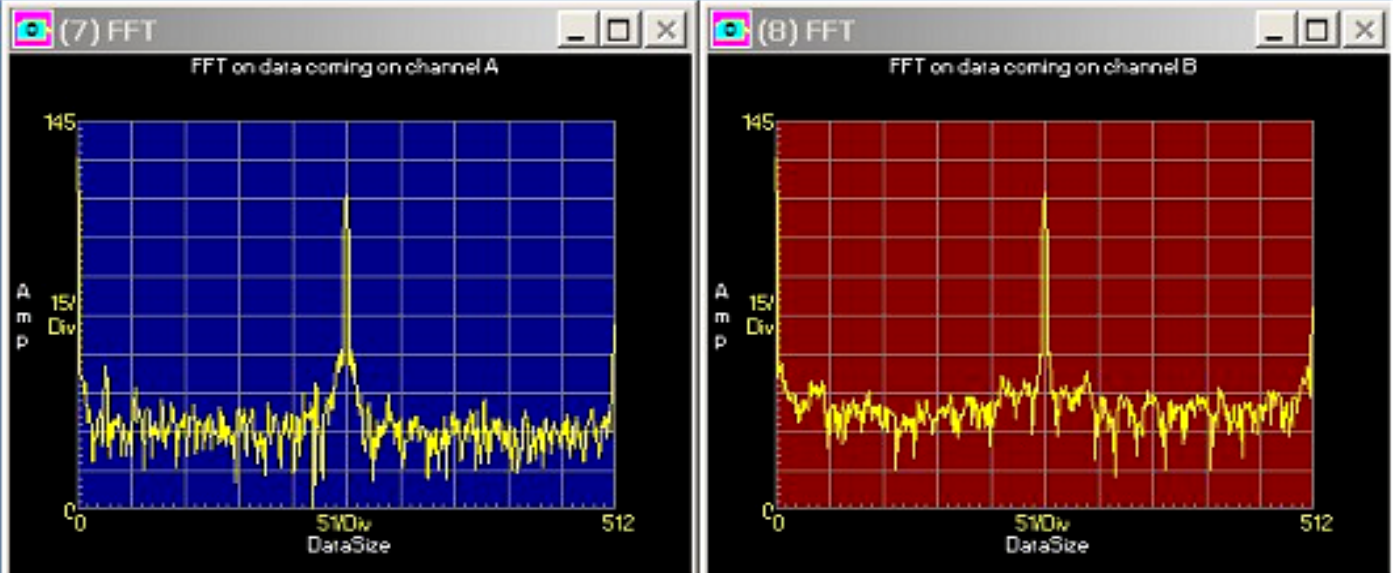
Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc
Date	27/11/2003	Revision	1
		Page	7 of 11

Now several display windows should open.
Automatically you should have a nice layout of the application.
If it's not the case go to **View** -> **restore** and browse to
\\MyFolder\SMT8036.PegView.

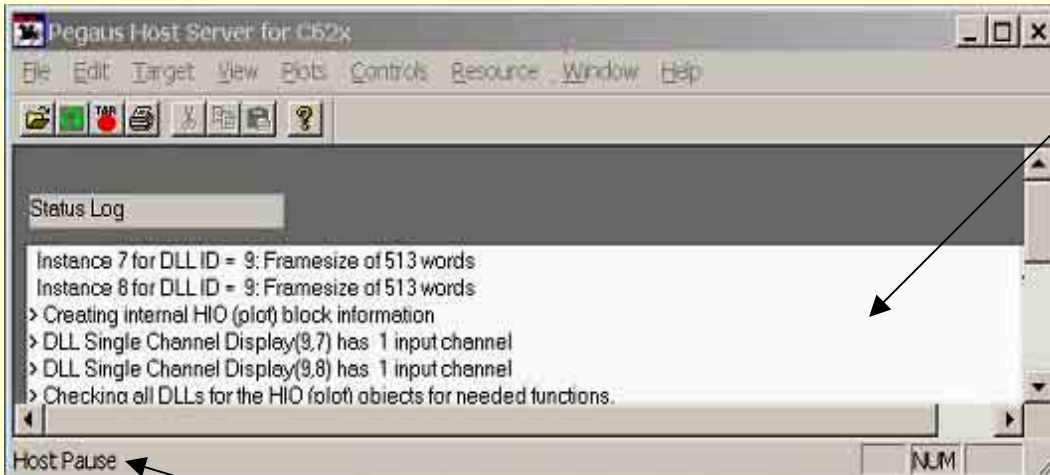
5 Pegasus Application.

Once the Pegasus Application is launched something similar to the **Figure 4** should appear on your screen.

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc		
Date	27/11/2003	Revision	1	Page	8 of 11

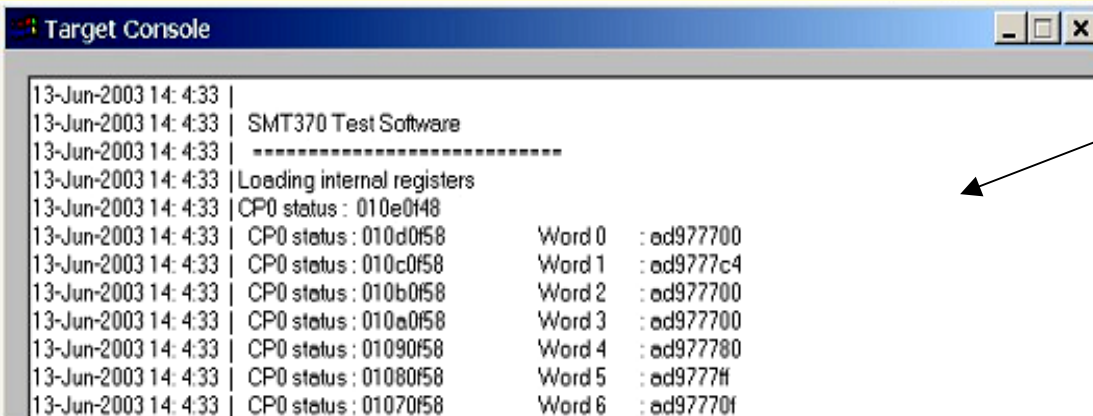


The blue window displays the FFT of the signal from channel A.
The red window displays the FFT of the signal from channel B.



The **Status Log** area displays informational messages, mainly when the DSP application is loading. If an error occurs, the status log window may provide additional information about the nature of the problem.

The **program status indicator** displays the state that the program is in, which is generally 'Ready' (i.e., no DSP application running) or 'Host Running,' which is the state once an application is loaded and running with all host HIO resources loaded.



During the startup of tasks the **Diamond OS Windows Server console window** displays status and any failures related to memory allocation at run time. Internal Diamond OS errors are also reported to the console window.

Figure 4: The Pegasus Application running

Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc
Date	27/11/2003	Revision	1
		Page	9 of 11

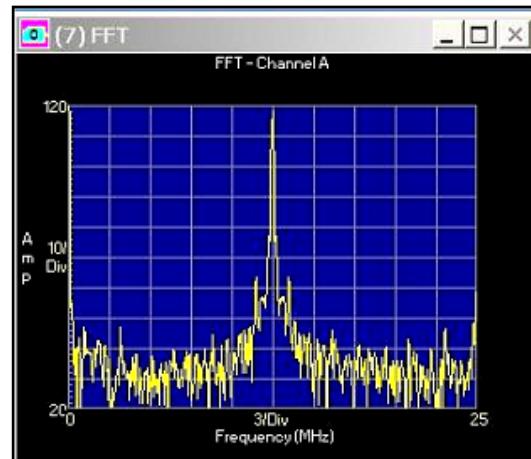
Comments:

Once the application is running you can double click on the display windows and change the settings.

For example there are six possible modes within the Single Channel Display block:

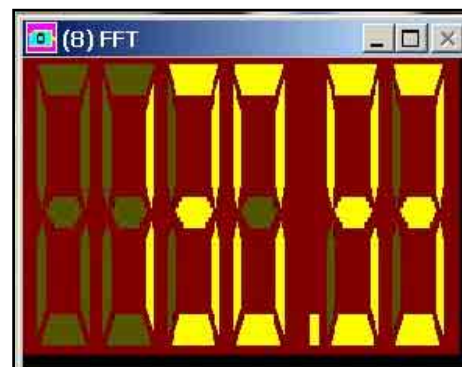
Connected Mode:

In this mode a data sample is plotted and then a line is drawn to the next data sample. If the shape option is specified, the chosen shape is drawn in the proper position and a line is drawn to the shape.



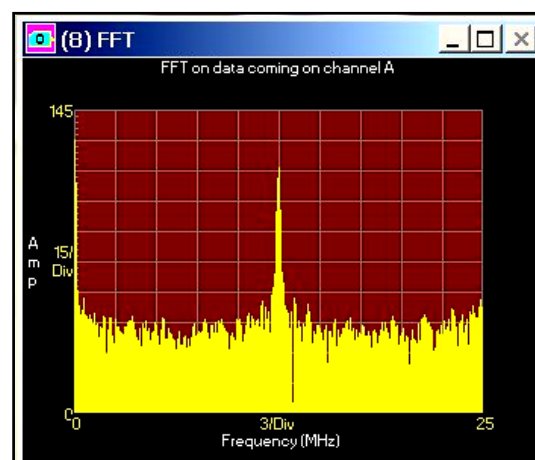
Digital mode:

In this mode, a single data point of the input frame of data is displayed in a digital format. The block's FrameOffset parameter allows you to select which data sample is displayed.



Discrete mode:

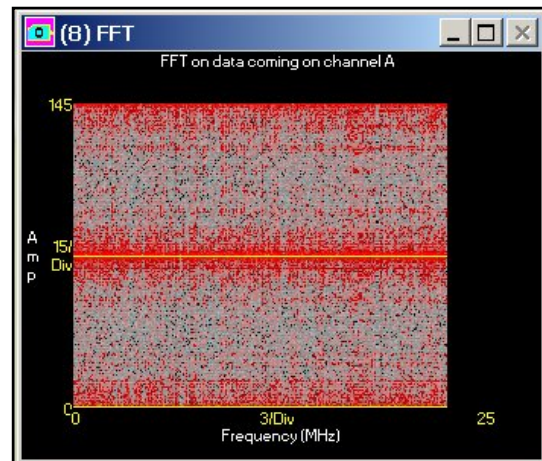
In this mode the data is plotted as with the Connected Mode, but additionally a vertical line is drawn to the X-axis. If shape option is specified, the chosen shape is drawn in the proper position and on the X-axis in the same horizontal position.



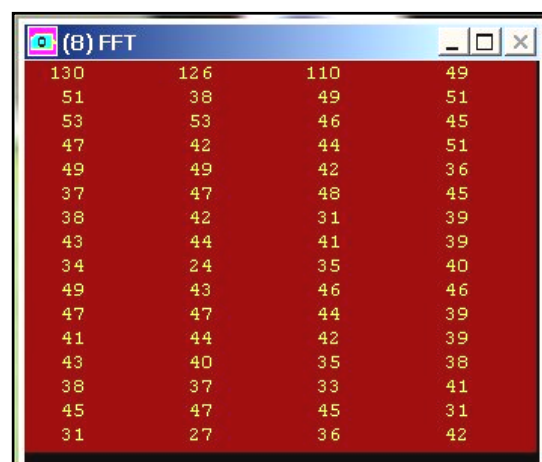
Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc	
Date	27/11/2003	Revision	1	Page 10 of 11

Spectrogram mode:

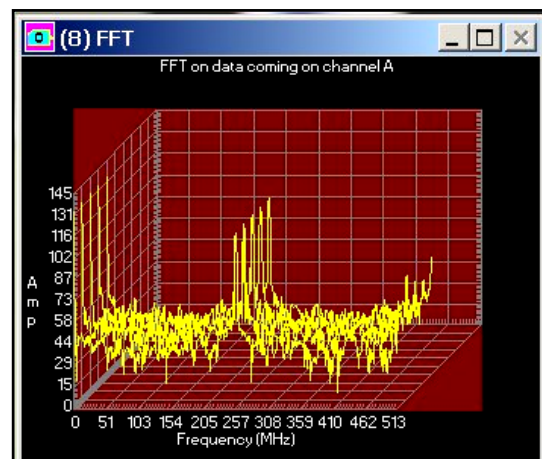
In this mode the data is plotted vertically, one pixel wide, and is assigned a display colour based upon the amplitude of the signal.

**Text Mode:**

In this mode the data is displayed numerically in the specified text format. Only the data that fits in the specified region will be displayed. You can size the window as required.

**Waterfall mode:**

In this mode several frames of data are displayed on the same graph such that a time history of the data is recorded. An angle offset can be applied to the data to allow for optimal viewing.



Document Title	Pegasus App	Document ID	PegApp_SMT8036E.doc
Date	27/11/2003	Revision	1
		Page	11 of 11

Filename: PegApp_SMT8036E.doc
Directory: G:\Sundance\Pegasus\System\DOCUMENTATIONS\SMT8036_8036E
Template: \\Lux\Quality\ISO9001\Templates\WordQualityTemplates\Test Instructions (QCF41).doc
Title: Test Procedure QCF41
Subject: Quality Control System
Author: Emilie Alvin
Keywords:
Comments:
Creation Date: 13/06/2003 15:20
Change Number: 18
Last Saved On: 27/11/2003 12:51
Last Saved By: Emilie Alvin
Total Editing Time: 90 Minutes
Last Printed On: 27/11/2003 12:58
As of Last Complete Printing
Number of Pages: 11
Number of Words: 604 (approx.)
Number of Characters: 3,445 (approx.)