



PCI-Express State Analysis Probe - FS4405

Quick Start Instructions

It is strongly recommended that the user carefully follow the User Manual the first time the preprocessor is used on a new PCIe link.

Step 1 Software Installation – Execute the three files (*FPSystems *Disassembler.exe*, *FS44xx Probe Mgr.exe*, *FS1160.exe*) that are on the FS4405 CD provided. An *FS1160* folder will be created on your desktop that will include the system files that can be loaded. Refer to the FS4405 User manual for more detailed information.

**This application may already be installed on the machine due to a previous install of a FuturePlus product.*

Step 2. Execute the system file that matches your probing cable, desired data decode format (8b or 10b), and target configuration. Then connect the probe cables from analyzer to preprocessor using the chart below.

Step 3. Attach the probing cable, and the reference Cable if desired, to the preprocessor and to the target system. Attach the USB cable from the preprocessor to the PC where the Probe Manager application has been installed.

Step 4. Power up the logic analyzer, the PC where the Probe Manager application resides (if not on the TLA), the FS4405 preprocessor, and the target system, in this order.

Step 5. Make sure to install the FS4405 USB drivers from the enclosed CD when prompted. Do not allow the PC/analyzer to get the USB drivers from the web, they must be installed from the CD.

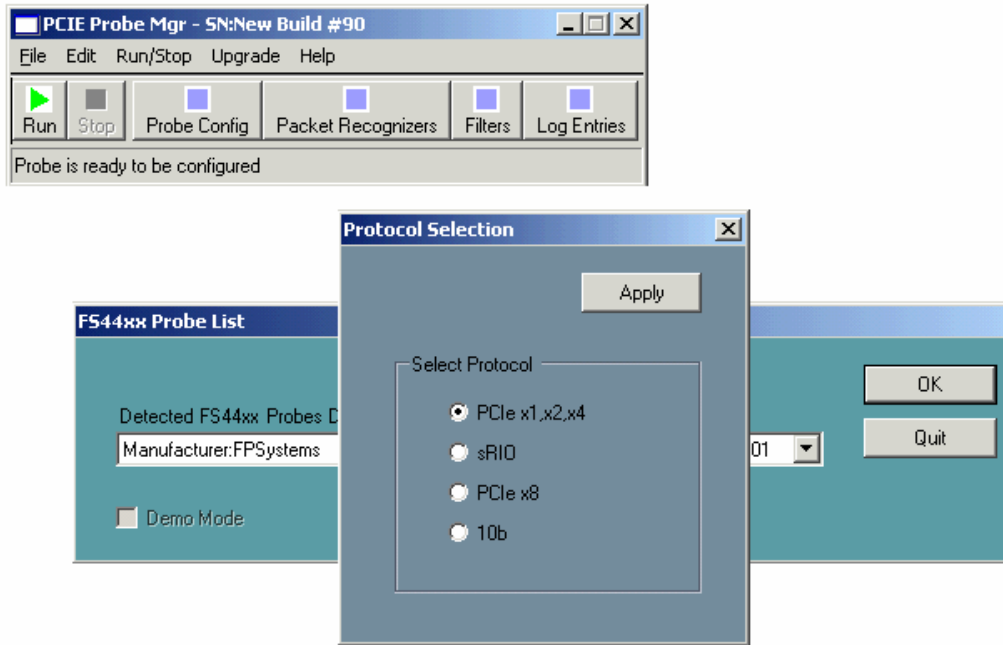
<u>Logic Analyzer</u>	<u>FS4405</u>	<u>Comment</u>
C2:C3	A1	CK3() Clock
C0:C1	A2	
A0:A1	A3	
D0:D1	A4	
A2:A3	B1	
D2:D3	B2	
E2:E3	B3	
E0:E1	B4	

The above chart shows the connections of the TLA7AA4 module to the preprocessor.

Refer to the User Manual for more information on system files.

Probe Manager

This Windows based application controls the configuration and operation of the FS4405 preprocessor. The Probe Manager application detects all FS4405 preprocessors that are connected to the USB bus and starts up with the device selection window which allows the user to select which preprocessor will be controlled and which FPGA file will be loaded.



The Probe Manager application is organized into 4 sections, each having their own dialogue window.

- Probe Configuration – Covers the type of probe cable used and basic aspects of the link being probed.
- Packet Recognizers – Provides access to the registers used to set 3 Packet Recognizers provided per Link which may be used to specify packet based triggering parameters.
- Filters – Allows the user to specify the types of packets to be filtered.
- Log Entries – Captures and displays run time probe status in a log file.

The Help button provides version information for the software and the currently loaded FPGA file.

The Upgrade button allows updating of the currently loaded FPGA code.

Refer to the User Manual for more information on the Probe Manager.

Logic Analyzer Setup

The setup files include some basic logic analyzer Trigger settings using the Event codes and the STORAGE bit. This allows the user to easily set-up the analyzer to trigger on any event, just one specific event, or a combination of events.

Probe LED Indicators

Link A or B Signal LED color	Meaning
Green	Link OK
Dark	Loss of Signal
Orange	8b10b Data Error
Red	Receiver Fault: Lost Lock, Lost Sync, FIFO Over/ Under run (See details in Log)

Link A or B Data LED color	Meaning
Green	Data clocking Into Analyzer
Dark	No Data clocking into Analyzer
Orange	8b10b Data Error, Framing, Idle or Alignment Error
Red	Processor Clock Error (stop and re-run probe)

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