PicoPak

Clock Measurement Module

Model PP1

Quick Start Guide

1. Install the PicoPak user interface program.
2. Make sure that you have full read/write privileges for the folder where the PicoPak are installed.
3. Connect the PicoPak module to the PC with its USB cable.
4. Connect a +7 dBm nominal 10 MHz reference to the PicoPak Reference input.
5. Connect a +7 dBm nominal 5 to 15 MHz signal to the PicoPak Signal input. Note: For 1st tests, it is desirable to apply the 10 MHz reference to both inputs using a T connector or (preferably) a 50 ohm RF power splitter.
6. Launch the PicoPak user interface program. The screen will show messages about its connectivity and initialization process.
7. Verify that the module is connected to a COM port as indicated by a green indication at the top left of the screen. If not connected, choose a valid PicoPak COM port from the list box. COM ports 1 through 256 are supported. All connected PicoPaks are enumerated, along with their COM numbers.
8. When connected, the COM indicator will be green, COM# and OK communications messages will be displayed, and the module S/N will be shown in the title bar.
9. Another message will indicate that the reference and signal inputs are connected.
10. Additional messages will say that the module is acquiring lock, show the approximate signal frequency and phase detector voltage, and indicate that the module is locked and ready to start a measurement.
11. Press the Start button to begin a measurement. The List box will show the 1 second data stream point #, hex data and phase values. The latter are also fractional frequency values. The measured frequency will be displayed with the box with the larger font.
12. The Plot Phase and Plot Freq radio buttons can be used to show a plot of those parameters.
13. Press Stop to end the measurement run and Close to terminate the PicoPak program.
14. Please use the Help button to consult the PicoPak help file for further information about its configuration and use. You will want to always enter the nominal signal frequency so that the fractional frequency values are correct. You may also want to enter a filename for the data and a description of the run, and perhaps apply an averaging factor to the stored data. Use the Configure button to bring up the configuration screen to set up the launching of Stable32 or TimeLab for on-the-fly analysis. The DDS Word display indicates the hex tuning word of the internal PicoPak DDS synthesizer, and it can be adjusted with the up (>) and down (<) buttons. The Freq Adj indicator shows if automatic frequency tracking is activated. Note that the PicoPak help file can be accessed during a run by launching another instance of the program and then pressing the Help button.

File: PicoPak Quick Start Guide.doc
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December 21, 2015