Introduction

The PicoPak clock measurement module package includes several software applications that support its use. This document briefly describes those programs.

PicoPak

The PicoPak program (PicoPak.exe) supports the operation of PicoPak clock measurement modules. The PicoPak main and configure screens are shown below:

• PicoSQL

The PicoSQL program (PicoSQL.exe) supports accessing clock data from an optional PicoPak PostgreSQL database. When the database is enabled, the PicoPak program main screen includes a DBase button that opens a database screen as shown below:
Clock data stored in a PicoPak PostgreSQL database can be accessed using the PicoSQL program, whose main screen is shown below:

- **PicoMon**

The PicoMon program (PicoMon.exe) supports the monitoring of PicoPak module clock measurements when a PicoPak PostgreSQL database is active. With it, a PicoPak measurement can be observed in quasi-real time and notes can be inserted as the run progresses. The PicoMon main screen is shown below:
• **PicoPak Web Monitor**

The PicoPak Web Monitor is a simple web-based server-side PHP script for monitoring active PicoPak and PicoScan clock measurements via an ordinary web browser. The script is typically installed on the same server as the PicoPak PostgreSQL database that supports its operation. The user is presented with a list of the active PicoPak and PicoScan modules, selects one along with the desired data type, and is shown a corresponding plot of the phase or frequency data, which is also written to a data file that can be accessed via ftp. Information is provided about the number of points, the run description, the signal and reference clocks, the measurement tau, the start and end (current) MJDs, and the time span of the run. The phase and frequency data are scaled to engineering units and the fractional frequency offset (based on either the phase slope or frequency average) and the Allan deviation at the measurement tau are shown as plot inserts. Examples of PicoPak Web Monitor screens are shown below.
• **Enumerate**

The Enumerate (Enumerate.exe) program is a command-line utility to enumerate the PicoPak modules connected to a computer, as shown in the screen shot below:
• **PPConsole**

  The PPConsole (PPConsole.exe) program is a command-line application to capture 10 ms data from one or two PicoPak modules, as shown in the screen shot below. This is particularly useful for making simultaneous two-channel measurements for a cross-correlation stability analysis.

![PPConsole Command Screen](image)

• **PicoSwitch**

  The PicoSwitch program (PicoSwitch.exe) supports the independent operation of a PicoScan quad RF switch module. With it, a PicoScan module can be used to select PicoPak signal or reference channels. For general use, the PicoSwitch program can read its DIP switch settings, clear all switches, select switches, go to the next or previous switch, or scan all or a selected set of switches. The PicoSwitch main screen is shown below:
The PicoScan program (PicoScan.exe) supports the operation of a PicoPak module clock measurement module along with a PicoScan quad RF switch. With them, 4-channel scanned clock measurements can be made. The PicoScan main screen is shown below: