

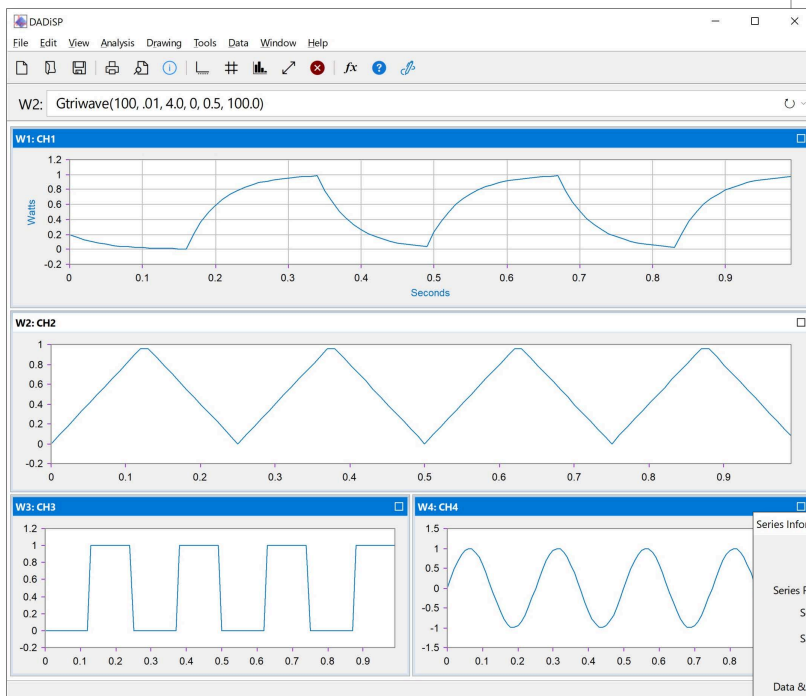
DADiSP / DADiMP

Stand Alone Data Import Module

DADiMP is a separate, standalone software module that extends the DADiSP importing functionality, allowing you to import data files with sophisticated formats. DADiMP imports your ASCII or Binary data files directly into DADiSP's Labbook data structure without actually running the DADiSP program.

KEY FEATURES

- Stand Alone Operation
- Small Executable Size
- Fast and Direct Data File Import
- Command Line or Header Based Import Parameters
- Imports Single Channel or Multi Channel Files
- ASCII and Binary Data Types Supported
- Imports Mixed Binary Files
- Import All Channels or a Selected Subset



Unlike DADiSP's standard internal IMPORT feature, DADiMP is run from the operating system command line or from a batch file or shell script. Because DADiMP and DADiSP are completely decoupled, DADiMP can run remotely, on a separate data collection computer. By providing direct, non-interactive access to your data files, DADiMP lets you automate, speed up, and simplify your standard data collection operations.

New Features

Previous versions limited the total file size to 2GB. DADiMP uses a 64 bit file index to enable handling of very large files. Although each individual series in a file is limited to 2GB, the total file size is now essentially *unlimited* (file sizes in the terabytes). Thus, a data file can now contain any number of series where each series can be up to 2GB in length.

In addition, previous versions of DADiMP import series one at a time, creating overhead in large interlaced files where DADiMP would take a separate pass through the data file for every series imported. DADiMP keeps header info and buffers for as many series as possible and imports all of them in a single pass through the file, greatly improving performance on large interlaced files.

Because the DADiMP code base is fully integrated with DADiSP, all new header keywords supported by DADiSP are automatically supported by DADiMP 5.0, including byte swapping, integer byte size, binary data types, date/time formats and dozens of others to simplify the importing of 3rd party ASCII and binary file formats.

DADiMP NEW FEATURES SUMMARY

- 64 Bit File Index supports Terabyte File Sizes
- Optimized ASCII and Binary Interlaced Data Importing
- Full DADiSP Header Format and Keyword Support
- Number of Importable Columns Limited only by Memory Size



Stand Alone Import Module

DADiMP is a small, fast running, stand alone executable program that automates and simplifies the task of data file import into a DADiSP Labbook and Dataset. DADiMP can import data files created by your own programs or by commercial database, spreadsheet and word-processing software. Because it is a self contained program, DADiMP can run separately and independently from DADiSP, allowing automated, unattended import jobs.

Data Importing Parameters

Data importing parameters can be specified at run-time, via the DADiMP command line, or through an ASCII Header. In addition, DADiMP can bypass foreign headers and other extraneous information embedded between channels.

Single and Multi-Channel Support

DADiMP can import files with a single channel of data. For example, import a Binary file of 100 points of 2-byte signed integer data sampled at 100 Hertz. DADiMP also understands two basic ways of organizing multiple channels: sequential and interlaced. In sequential files, the data from each channel is a contiguous block -- Channel 1 followed by Channel 2 followed by Channel 3, and so on -- while the channels in interlaced files are interwoven - - sample 1 of Channels 1, 2, and 3 followed by sample 2 of Channels 1, 2, and 3.

Multiple File/Data Types

DADiSP supports a variety of data types, including:

Data Type	Description
ASCII	ASCII data consisting of decimal numbers separated by a space, tab, carriage-return, comma or semicolon
BYTE	unsigned one-byte integer
SBYTE	signed one-byte integer
UINTeger	unsigned two-byte integer
SINteger	signed two-byte integer
LONG	signed four-byte integer
ULONG	unsigned four-byte integer
FLOAT	IEEE four-byte floating point
DOUBLE	IEEE eight-byte double precision floating point

DADiMP can also handle data records with mixed Binary data types.



Selective Importing

All of the fields (channels) in a file can be imported or choose a subset by selecting the column number. Data can be read from the middle of the file or any location by specifying an offset. Using the OFFSET parameter, non-DADiSP header information can be preserved in the original file, but safely bypassed. Bytes or characters between channels can be skipped, eliminating bad or unwanted data.

DADiMP Example Header

DADiSP maintains summary information that describes each series or channel contained in the DADiSP database. To import data with DADiMP, you must supply an ASCII header describing each channel that you plan to import. The header information can be stored in the same file as the data or in a separate file.

The example to the right shows a standard DADiMP input file containing a data header and four series of ASCII data:

If the filename of this data is lot1.dat, the following command line imports the data:

```
dadimp lot1.dat
```

The file is then imported into the Dataset Lot1 located in the Labbook PROCESS1.

To specifically import MATLAB MAT files, see the DADiSP/MAT File Module.

Time Displacement and Data Scaling

The X_OFFSET, RATE, parameters allow specification of the time base of your data and the Y_OFFSET and SLOPE parameters support independent scaling of each data series. Because uniformly sampled data can be specified with just the X_OFFSET and RATE parameters, the entire time channel can be eliminated, resulting in faster, more robust importing and data processing. Non-uniformly sampled data can be displayed and processed as an XY series.

```
LABBOOK      PROCESS1
DATASET      Lot1
SERIES       Pressure, Temperature, Level, Lot
NUM_SERIES   4
STORAGE_MODE INTERLACED
FILE_TYPE    ASCII
RATE         10
VERT_UNITS   PSI, Degrees C, Centimeters, No Units
HORZ_UNITS   Sec
COMMENT      Interlaced multi-channel Process 1, Lot 1
DATA
14.000000,    27.147235,    0.842013,    1
14.187381,    27.032460,    0.901001,    1
14.368125,    27.784237,    2.237624,    1
14.535827,    27.176321,    1.768234,    1

etc...
```

