

PowerPROview

Data Memory Module

Software Users Guide

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TABLE OF CONTENTS

Introduction.....	1
Connecting the Memory Module.....	1
Toolbars.....	1
Memory Module Toolbar.....	1
Memory Module Control Window	2
Memory Module Control Toolbar.....	2
Recorded Info.....	3
Downloading Recorded Data	3
Memory Usage.....	3
Memory Module Configuration.....	4
Memory Module Configuration Editor.....	4
Memory Module Configuration General Settings.....	4
Memory Module Configuration Recording Settings.....	5

PowerPROview

Data Memory Module Software Users Guide

Introduction

This manual deals with the Data Memory Module connected to the PowerPROview software. For information on operating the PowerPROview software see the PowerPROview Users Manual.

Connecting the Memory Module

The Data Memory Module can be connected by either using a POWERLink USB adapter or by connecting it to a Power Analyzer Pro's ESC port. Typically it will be connected to a Power Analyzer Pro for it can only record the Pro's data output. Connecting a Memory Module using a POWERLink gives you the ability to download, erase and configure but not to record.

Toolbars

The toolbars and menu options for the Data Memory Module will not appear until PowerPROview connects to a device with a Memory Module attached. When disconnected the toolbars and menu options will disappear.

Memory Module Toolbar

The Data Memory Module, when connected, will have one toolbar displayed that allows you to open the Memory module control window which allows you to view, download and erase the data recordings in the Memory Module, Erase all recorded data and Configure the Memory Module.



Memory Module Toolbar



Open Memory Module Control Window



Download Recorded Data



Erase All Recorded Data

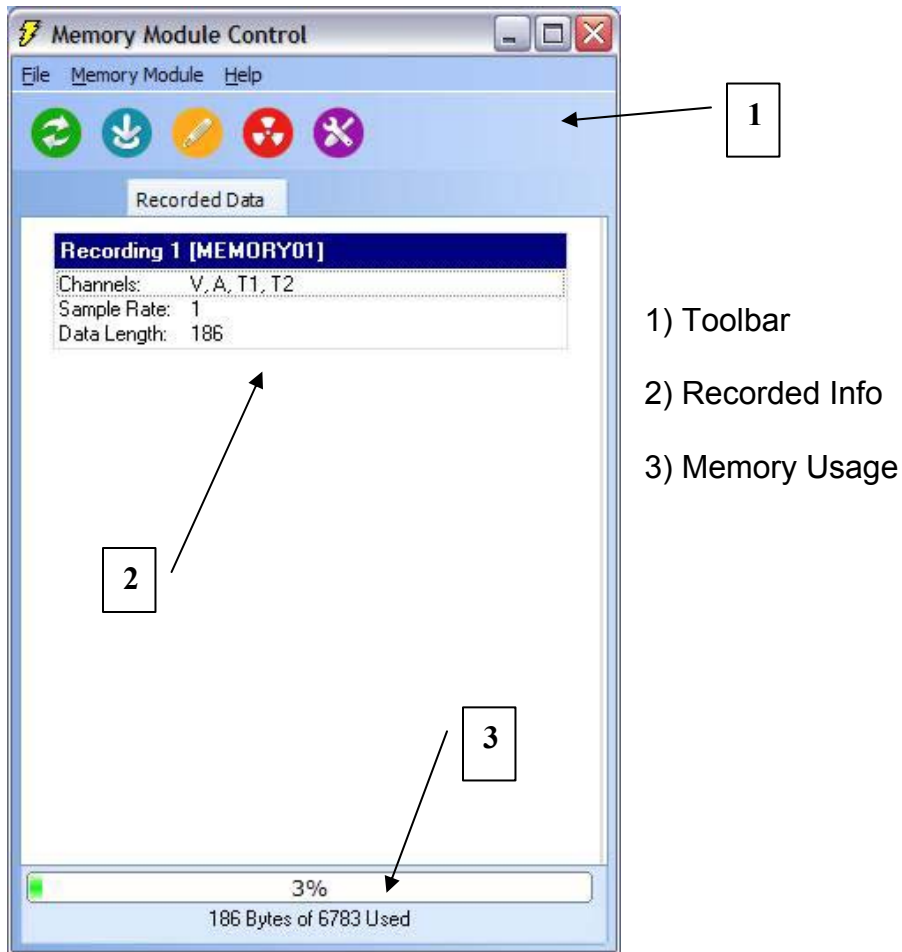


Configure Memory Module

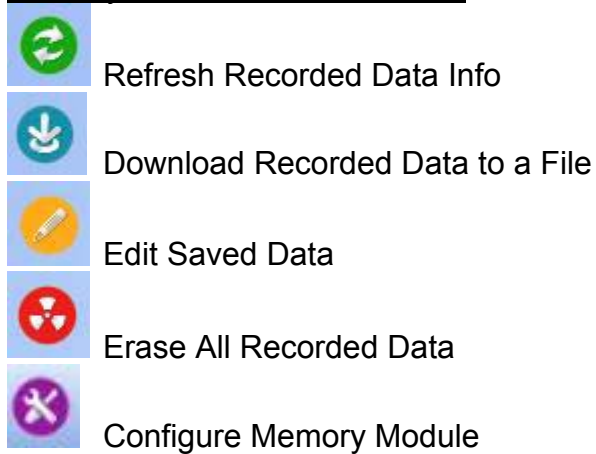
PowerPROview

Data Memory Module Software Users Guide

Memory Module Control Window



Memory Module Control Toolbar

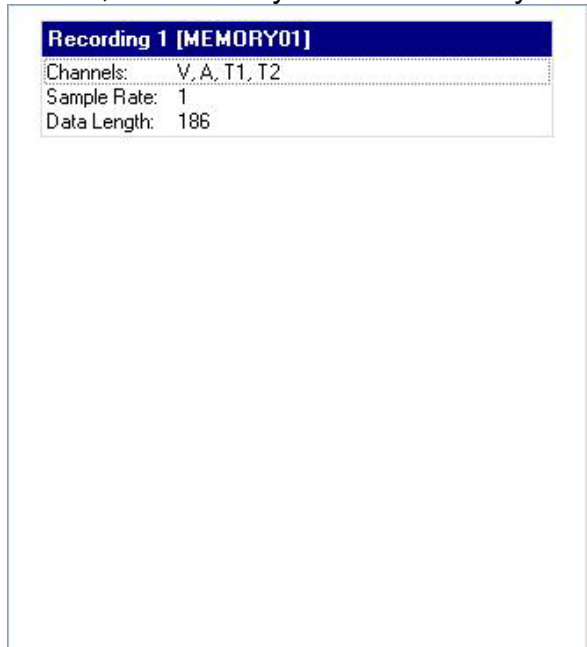


PowerPROview

Data Memory Module Software Users Guide

Recorded Info

The center portion of the control window shows the recording that is in the memory module's on-board memory and information about that recording. NOTE: Unlike the Oracle, the Memory Module can only hold one recording at a time.



For the recording, the module name, channels that are recorded, averaging and data length info are shown.

Downloading Recorded Data

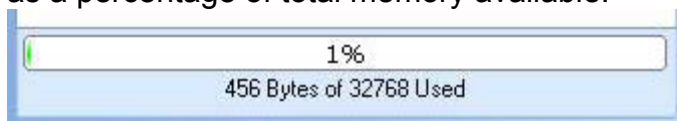
To download the recording, click on the download button. You can also double click on the recording info to download it.

The download function will download the data to memory and then saves it to a file. Name your data files such that the name will tell you what the data is or where it is from.

Once data has been downloaded you can edit and/or export the data using the Edit Saved Data function. You can also load the data into a graph object on a data view from a saved data file for analysis and comparison to other saved data.

Memory Usage

The memory usage indicates the amount of memory used by the recording in bytes and as a percentage of total memory available.



PowerPROview

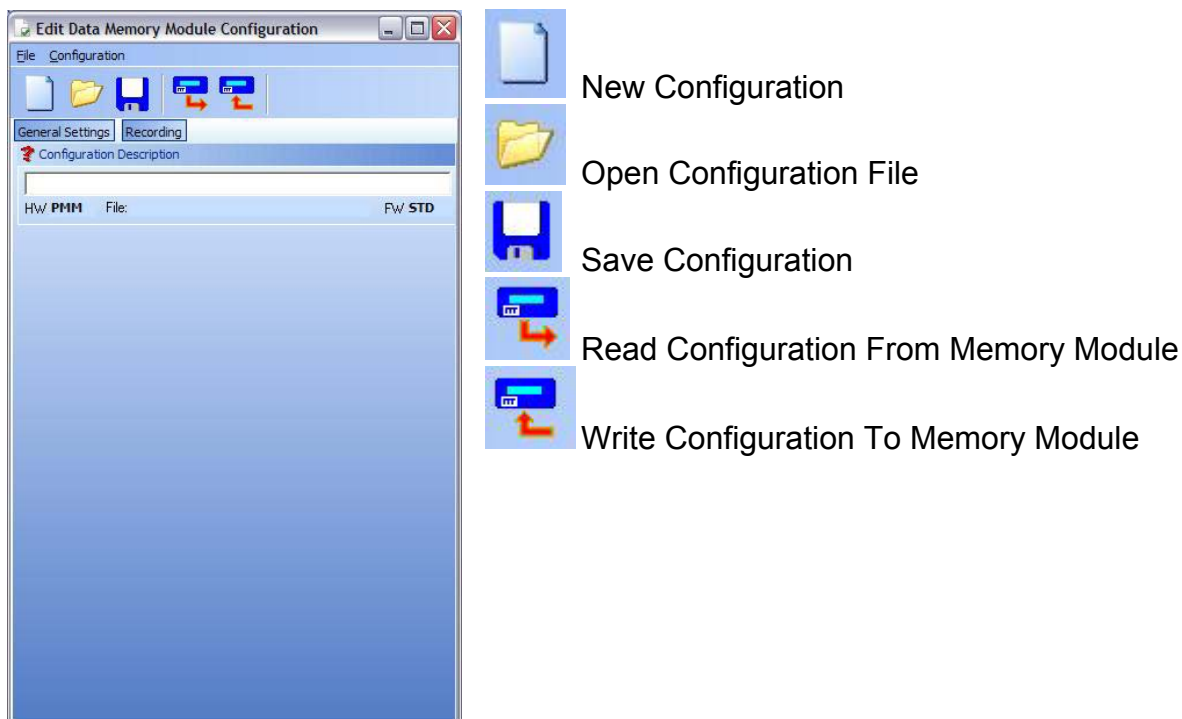
Data Memory Module Software Users Guide

Memory Module Configuration

You can configure various parameters of the Data Memory Module. Configurations can be saved, deleted, edited, read from or written to a Memory Module. When you click on the Configuration toolbar item the Configuration editor will appear with the current configuration information read from the Memory Module. You can then modify and write the configuration back to the Memory Module, save that configuration to disk, or read a previously saved configuration from disk and then write it to the Memory Module.

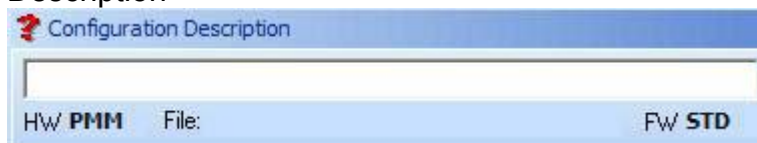
Memory Module Configuration Editor

There are two groups of configuration settings for the Memory Module: General Settings and Recording.



Memory Module Configuration General Settings

Description



The description field is where you can enter a short description for the configuration file. A description is only needed when saving a configuration to disk and is not written to the Memory Module.

PowerPROview

Data Memory Module Software Users Guide

Memory Module Configuration Recording Settings

The Recording settings determine the on-board recording features.

The screenshot shows a software window titled "Memory Module Configuration Recording Settings". It has several sections: "Module Name" with a text box containing "MEMORY01"; "Data Channels" with a list of checkboxes for "Volts", "Current", "AUX", "Temp 1", "Temp 2", "Thrust", and "RPM", along with "All" and "None" buttons; "Data Averaging" with input fields for "Averaging" (set to 1), "Readings per Data Point", "Giving 1 Sample Every" (set to 0.229), "Secs", and "And an Approximate Recording Time of" (set to 18.3), "Mins"; and "Trigger" with a text box for "Start Recording when Amps exceeds" (set to 0) and "Amps".

Module Name

The screenshot shows a close-up of the "Module Name" section of the software window, featuring a text box with the name "MEMORY01".

Each Memory Module can have its own reference or name. If you have multiple Memory Module's then this would be useful for telling one unit from another. The Memory Module's name is also saved with the recorded data so that you will know which Memory Module the data came from. You could also use the name to indicate the configuration or model the data is being recorded from.

Data Channels

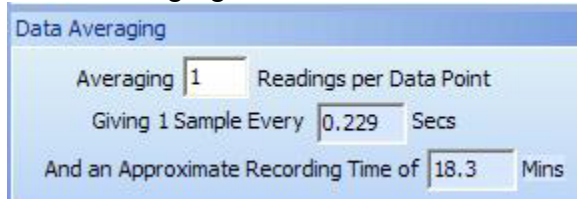
The screenshot shows a close-up of the "Data Channels" section of the software window. It displays a list of checkboxes for "Volts", "Current", "AUX", "Temp 1", "Temp 2", "Thrust", and "RPM". The "Volts", "Current", "Temp 1", and "Temp 2" checkboxes are checked. To the right of the list are "All" and "None" buttons.

You can select only those channels of data to record that you are interested in. The more channels you select the less time you can record. The fewer channels selected results in a longer recording time.

PowerPROview

Data Memory Module Software Users Guide

Data Averaging

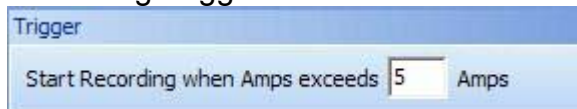


The screenshot shows a dialog box titled "Data Averaging". It contains three input fields: "Averaging" set to 1, "Readings per Data Point" (which is disabled), "Giving 1 Sample Every" set to 0.229, "Secs" (which is disabled), and "And an Approximate Recording Time of" set to 18.3, "Mins" (which is disabled).

You can set data averaging to average a number of points before recording the data to memory. This is useful if you are recording a long period of data and do not need every single data sample.

The approximate recording time is dependant upon the number of channels recorded and the averaging settings.

Recording Trigger



The screenshot shows a dialog box titled "Trigger". It contains one input field: "Start Recording when Amps exceeds" set to 5, "Amps".

The on-board recording will not start until the current exceeds the set threshold. If the threshold is set to 0 then it will start recording immediately. Typically you would set this threshold such that the recording will trigger after you start flying so it should be set just above the idling current.