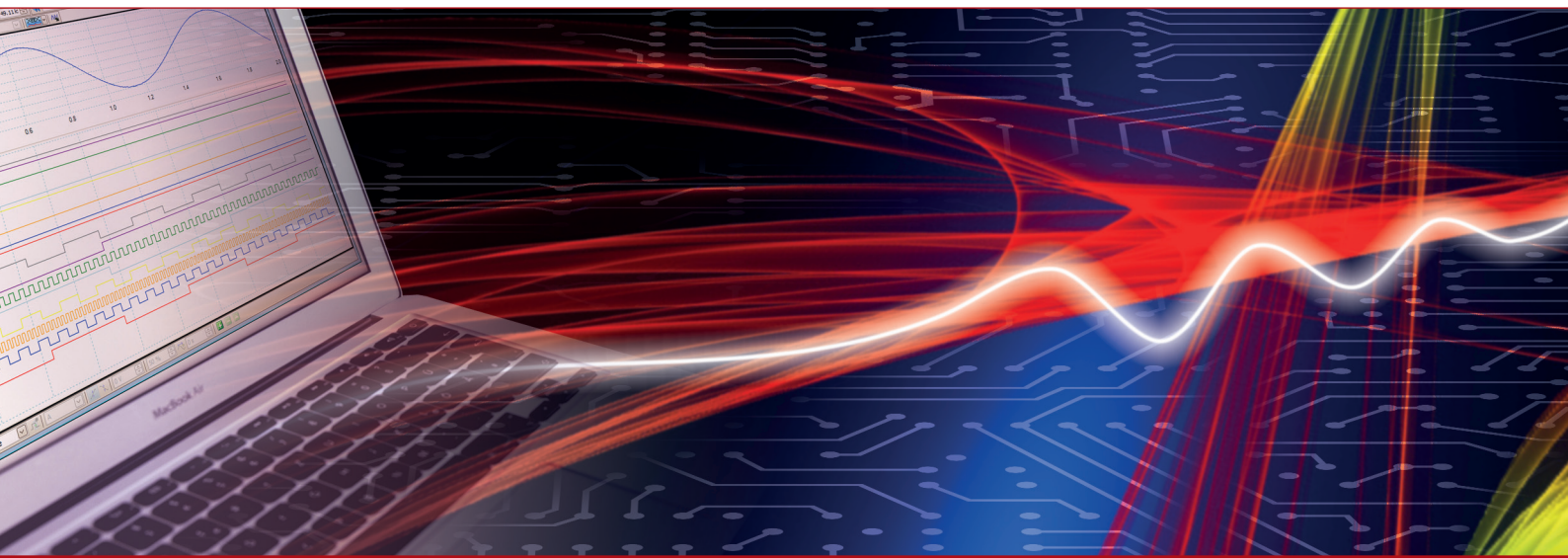


Product Datasheet - Technical Specifications



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Your contact

Technical and commercial sales, price information,
quotations, demo/test equipment, consulting:

Tel.: **+49 - 81 41 - 52 71-0**

FAX: **+49 - 81 41 - 52 71-129**

E-Mail: sales@meilhaus.com

Downloads:

www.meilhaus.com/en/infos/download.htm

Meilhaus Electronic GmbH
Am Sonnenlicht 2
82239 Alling/Germany

Tel.	+49 - 81 41 - 52 71-0
Fax	+49 - 81 41 - 52 71-129
E-Mail	sales@meilhaus.com

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DAQami

Advanced Data Logging Application



Overview

DAQami provides an easy-to-use drag-and-drop interface that makes acquiring, viewing, and logging data a quick and simple task.

Users simply select a supported device, activate and configure available analog, digital, and counter channels, and then select one or more displays to plot the data.

When a DAQami acquisition runs, the program acquires and logs data from selected channels, while at the same time plotting the data on the displays for viewing.

Users can open and review logged data, and save configured acquisitions to file for reuse and modification.

Acquired data can be exported to a comma-separated values (.csv) file and opened in Microsoft Excel.

New and Enhanced Features in DAQami 2.1

The following features have been added to DAQami 2.1:

Timestamping

- Timestamping of data added to synchronize acquired signals
- Hardware-paced channels and software-paced channels can be added to the same display

German Language Support

Features

- Out-of-the-box software to quickly and easily acquire, view, and log data from supported DAQ devices
- Acquires data from analog input, digital input, and counter input channels
- Configure device, channel, acquisition, and display options
- Acquire and log up to 1 million samples per channel
- View data on any combination of Scalar, Strip, and Block displays
- Export acquired data to a .csv file (auto export options available)
- Save configurations to a file for later reuse and modification
- Customize display size, location, and channel/trace colors
- Includes a software-based DEMO-BOARD to evaluate DAQami

System Requirements

- Microsoft® Windows® 10/8/7/Vista® 32/64-bit

DAQami

General Information

Getting Started

When DAQami is launched, the Getting Started dialog box opens. Users can start one of the following DAQami operations from this dialog box:

- Create a new DAQami configuration.
- Open a previously saved configuration.
- Open a saved data file.



Use the Getting Started dialog box to create or open a configuration or data file, open the Help, and specify whether to show the Step-by-Step Guide on the main window.

Configuring a DAQami Acquisition

Users select device, channel, and acquisition options from the Configuration Panel, and add displays and channels to the Display Panel.

Settings can be saved to a configuration file for reuse and modification.

Selecting a Device

Users can add a DAQami-supported physical device (USB or network) or the DEMO-BOARD to the acquisition. DAQami can acquire data from analog (voltage or temperature), digital, and counter channels.

One device can be used per acquisition.

Once a device is added, you can view device information on the Device tab, and change the channel mode if the analog device supports differential and single-ended analog input configurations.

Activating and Configuring Channels

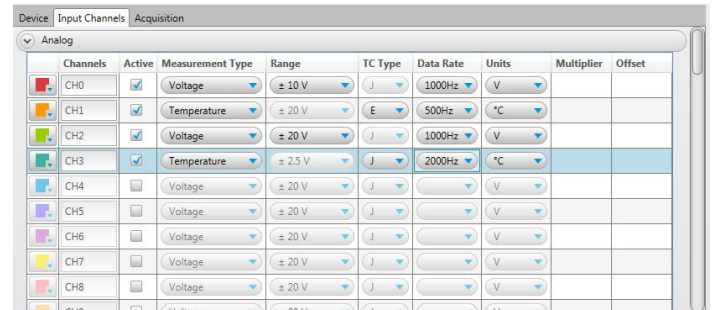
Depending on the type of data that a device acquires, analog, digital, and counter channels can be activated for an acquisition and configured in the **Input Channels** tab.

The channel color used on displays and the channel name can be changed for active channels.

Configuring Analog Channels

DAQami can acquire voltage and temperature data on a per-channel basis. Users select the input range and unit for voltage measurement channels, and the TC Type and unit for thermocouple (TC) measurement channels. The data rate can also be set on devices that include this option.

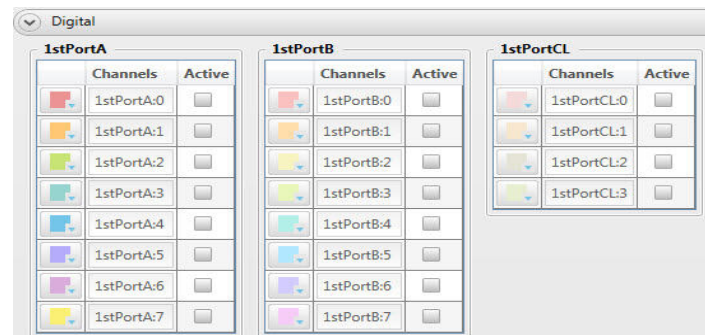
Custom units can also be configured using a multiplier and offset.



Activate the analog channels to include in the acquisition from the **Analog** section of the **Input Channels** tab. Channel options include measurement type, voltage range, TC type, data rate, and units.

Configuring Digital Channels

DAQami can acquire digital data on a per-channel basis.



Activate the digital channels to include in the acquisition from the **Digital** section of the **Input Channels** tab.

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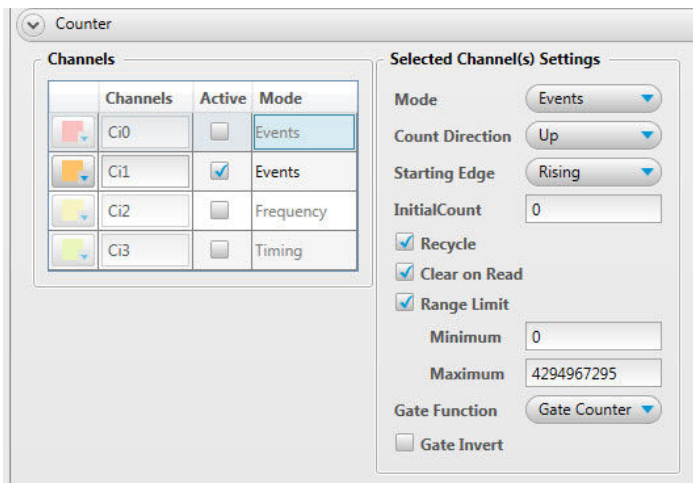
General Information

Configuring Counter Channels

DAQami can acquire counter data on a per-channel basis for devices that support counter operations.

Depending on the counter features available on the device, DAQami supports the following counter modes:

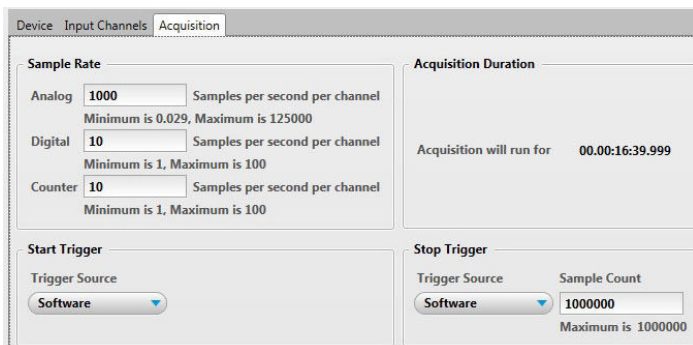
- **Events** – High-speed pulse event counter for general counting applications.
- **Frequency*** – Measure the frequency of counter input signal.
- **Period*** – Measure the period of counter input signal.
- **Pulse Width*** – Measure the time from the rising edge to the falling edge, or vice versa, of a counter input signal.
- **Timing*** – Measures the time between an event on the counter input and a subsequent event on the counter gate.



Select the counter mode and configure mode-specific settings from the **Counter** section of the **Input Channels** tab.

Configuring Acquisition Options

Users can enter a sample rate on the **Acquisition** tab for each type of data being acquired – analog, digital, and counter – along with setting triggers to start and stop an acquisition. Each active channel can acquire up to 1 million samples.



Set the sample rates and sample count for activated analog, digital, and counter channels, along with the trigger conditions that start and stop a DAQami acquisition.

* Currently only supported by USB-CTR Series devices.

Viewing Data on Displays

Users can add the following displays to the Display Panel to view data:

- **Scalar** – Shows the numeric value of a data point.
- **Strip** – Shows data points for each channel, and continuously scrolls from left to right.
- **Block** – Shows a specified number, or block, of data points for each channel.

Displays can be resized, rearranged, and removed from the Display Panel. The number of displays that users can add to the Display Panel is limited only by the computer being used. Adding a large number of displays, however, may affect performance.

Adding Channels to Displays

Once a display is added to the Display Panel, any activated analog, digital, or counter channel can be added to it from the **Active Channels** panel.

The only restriction is that hardware-paced analog signals cannot be added to the same display with software-paced digital or counter signals.

Channels can also be moved and copied from one display to another. Data acquired from the channel is automatically added to the target display.

Customizing a Display

Use the icons at the top of a display to perform the following operations:

- Zoom in/zoom out as data is being acquired and displayed.
- Copy the display as an image to paste into another application.
- Add cursors to Strip and Block displays to show the value of specific data points, and calculate the time and amplitude deltas between the two cursors.
- Open the **Display Settings** dialog box.

Use the **Display Settings** dialog box to change the following visual settings of a display:

- Select a light or dark background theme.
- Show or hide the grid on a Strip or Block display.
- Remove channels from the display.
- Change channel/trace colors
- Change the font used to display values on a Scalar display.
- Configure the x-axis to display a specific amount of data on a Strip or Block display.
- Configure the y-axis settings for auto-scaling or for a user-configured fixed scale on a Strip or Block display

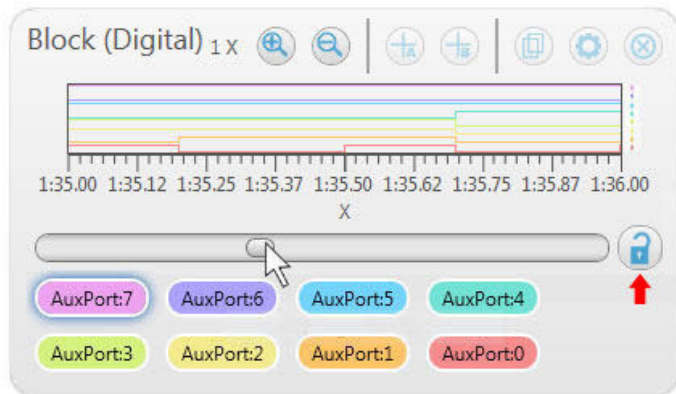
DAQami

Ordering

Acquiring and Logging Data

When an acquisition is started, each display updates with channel data added to it. Data from all activated channels is automatically logged to file, regardless of whether the channel is added to a display.

While data is being acquired, each display can be changed from live mode to review mode. Click the lock icon on a display to switch to review mode. The icon becomes unlocked, the scrollbar is enabled, and users can scroll back and forth to review acquired data. Click on the lock icon again to return the display to live mode.



When a display is in live mode – the lock icon is locked – data updates on the display as it is acquired. When a display is in review mode – the lock icon is unlocked – users can review data during an acquisition.

Exporting Logged Data

Logged data can be exported to a .csv file. Users can set **Auto Export** preferences to enable, disable, or prompt to auto export after each acquisition.

To export data, specify a file name and location, the number of decimal places to export the data, and whether to export the data with relative or absolute time. Users can also choose whether to overwrite an existing file, or to create a new file for each logging session. The logged data can be previewed before being exported to a file.

Opening and Reviewing Logged Data

Users can open and review previously acquired log data. All DAQami features are available when reviewing a data file – adding displays, moving/copying channels between displays, adding cursors, and so on. Device and display settings are saved with each log file.

The four most recently-reviewed data files can be easily reopened using hyperlinks on the **Getting Started** dialog box.

Saving and Opening Configuration Files

Users can save the current configuration to file at any time. Once a configuration is saved, users can open the file to use again, modify, and save the changes.

When a configuration file is opened, the DAQami main window updates with the device, channel, acquisition, and display settings that are saved in the file.

The four most recently-saved configuration files can be easily reopened using hyperlinks on the **Getting Started** dialog box.

DAQami Help, Tooltips, and Step-by-Step Guide

DAQami includes a comprehensive, context-sensitive help file, tooltips, and an onscreen **Step-by-Step Guide** which explains how to add a device, configure a device, add a display, and acquire data.

DAQami

Advanced Data Logging Application Quick Start

Install DAQami and perform the following steps to acquire, display, and log data.

1



Connect hardware to a computer, and a signal source to either:

- analog input (AI) channels 0–3
- digital input (DI) channels 0–3 if the device does not acquire analog data

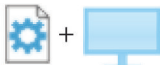
Note: Skip this step to acquire data with the DAQami software-based *DEMO-BOARD*.

2



Launch DAQami software.

3



Choose **New Configuration** and select **Automatic**.

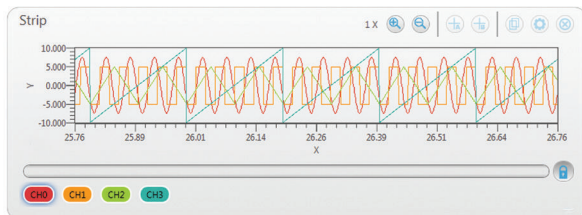
The new configuration contains:

- the connected device or the DEMO-BOARD
- AI or DI channels 0–3
- a Strip display with the AI or DI channels added to it

4



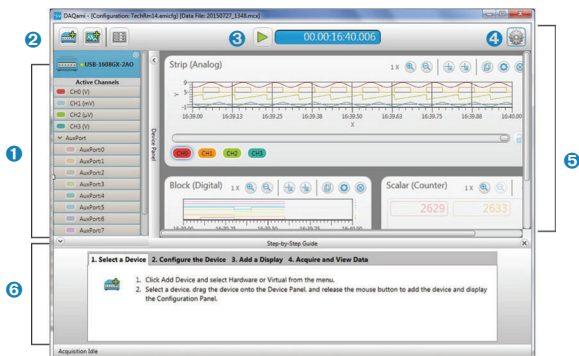
Click Start to acquire data and plot it on the Strip display.



Refer to the DAQami Help for detailed information about how to modify acquisition settings, customize each display, and export logged data.

DAQami

Advanced Data Logging Application Quick Reference



- 1 Device Panel: Lists the device and activated channels added to the configuration.
- 2  Lists the physical (USB, Network) and virtual (DEMO-BOARD) devices you can add to the Device Panel.
- 3  Lists the displays you can add to the Display Panel.
- 4  Opens the Display Panel. Toggles with  to open the Configuration Panel.
- 5  Starts the acquisition. Toggles with  to stop the acquisition.
 Displays the elapsed time when acquiring data or reviewing data.
- 6  Opens a menu with configuration/data file, data logging, and data export options.
- 5 Panel area: Shows the Display Panel (shown above) or the Configuration Panel (not shown).
- 6 Step-by-Step Guide: Instructions for configuring and running a DAQami acquisition.