


NEW PRODUCT	 A National Instruments Company	Release Year 2021	Released Quarter Q4
Digilent Part Number 6069-410-015 (MCC USB-1608FS-Plus)		Category DAQ and Data Logging	

OVERVIEW

Product Name: MCC USB-1608FS-Plus Simultaneous USB DAQ Device

Product Subtitle: 16-bit simultaneous DAQ device for high-speed data acquisition applications

Product Description: The Measurement Computing USB-1808X is a USB-based DAQ device with eight simultaneous analog inputs (A/D per channel), 16-bit resolution, 100 kS/s/ch sample rate (400 kS/s aggregate), one 32-bit counter, and eight digital I/O. It offers software-selectable analog input ranges for ± 10 V, ± 5 V, ± 2 V, and ± 1 V. Each analog input channel has a dedicated 16-bit A/D converter for true simultaneous sampling of all 8 inputs. This device is USB-powered and requires no external power.

With hardware paced mode, the maximum throughput rate is 100 kS/s for any one channel, up to about 400 kS/s aggregate for multiple channels. Use burst scan mode to run any number of channels at the maximum rate of 100kS/s up to the full capacity of the 32K sample FIFO. The maximum sampling rate is 800 kS/s aggregate for all channels.

Each of the eight digital I/O channels is individually-configurable for input or output. When configured for input, the digital I/O terminals can detect the state of any TTL-level input. The digital I/O channels are high-drive (24 mA) connections.

A 32-bit event counter can accept a signal up to 1 MHz. The internal counter increments when the TTL levels transition from low to high.

The USB-1608FS-Plus has a bidirectional external clock terminal. When configured for input, A/D conversions can be paced by an external source. The USB-1608FS-Plus supports TTL-level input signals up to 100 kHz. When configured for output, this device can pace A/D conversions on a second device and acquire data from all input channels simultaneously.

The USB-1608FS-Plus provides an external digital trigger input and a trigger mode that is edge or level sensitive. Edge sensitive is software-selectable for rising or falling edge. Level sensitive is software-selectable for high or low level.

Software support includes DAQami, an optional out-of-the-box application for data logging, visualization, and signal generation. Data can be viewed in real-time or post-acquisition on user-configurable displays. Drivers are included for the most popular applications and programming languages including Visual C++[®], Visual C#[®], Visual Basic[®].NET, DASyLab[®], LabVIEW[™], MATLAB[®], and Python[™].

Key Search Terms: Measurement Computing, DAQ, data acquisition, USB DAQ, high-speed DAQ, simultaneous DAQ, simultaneous sampling, digital, FIFO, TTL, C++, C#, Visual Basic.Net, DASyLab, LabVIEW, MATLAB, Python

Video Link: N/A

Datasheet: <https://www.mccdaq.com/PDFs/specs/DS-USB-1608FS-Plus.pdf>

Demo / Project Links:

- [MCC Software Overview](#)
- [MCC Software Downloads](#)
- [MCC example programs](#)

- [USB-1608FS-Plus Manual](#)

Features

- 8 SE simultaneous analog inputs
- 16-bit resolution
- 100 kS/s/ch sample rate (400 kS/s aggregate)
- ± 10 V, ± 5 V, ± 2 V, ± 1 V input ranges
- Eight digital I/O
- One counter input
- No external power required. USB cable is included

Product Image



Image Links:

- <https://drive.google.com/file/d/1oawszccg-6MP39z4NPee4hoUrsYLvN7L/view?usp=sharing>
- https://drive.google.com/file/d/1U0OIU0AyjJ3XqWxpO9j_8ZKFdR4tAW_b/view?usp=sharing
- <https://drive.google.com/file/d/1IE8RrfUeZ4eEqmhhuIYueJks2AUzxGcQ/view?usp=sharing>

3 Target Applications

- NA

Related Products

- MCC USB-1808X (PN: 6069-410-014)