


NEW PRODUCT	 A National Instruments Company	Release Year 2021	Released Quarter Q4
Digilent Part Number 6069-410-010 (MCC USB-1608GX) / 6069-410-011 (MCC USB-1608GX-2AO)		Category DAQ and Data Logging	

OVERVIEW

Product Name: MCC USB-1608GX and MCC USB-1608GX-2AO High-Speed Multifunction USB DAQ Devices

Product Subtitle: 16-bit multifunction DAQ devices for general purpose data acquisition applications

Product Description: The Measurement Computing USB-1608GX and USB-1608GX-2AO are USB-based, high-speed, multifunction DAQ devices. Each device offers 16 SE/8 DIFF analog inputs, eight digital I/O channels, two counter inputs, and one timer output. The USB-1608GX-2AO features two, 16-bit analog output channels with DAC rates up to 500 kS/s. These devices are USB-powered and require no external power.

These devices provide 16-bit analog inputs that are software-selectable as eight DIFF or 16 SE inputs. They also support input ranges of ± 10 V, ± 5 V, ± 2 V, and ± 1 V that are software-selectable per channel. Both devices feature a maximum 500 kS/s sample rate.

The USB-1608GX-2AO has two 16-bit analog outputs that can be updated at a rate of 250 kS/s per channel; one output can be updated at a rate of 500 kS/s. The output range is fixed at ± 10 V.

USB-1608G Series devices have an external digital trigger input. The trigger mode is software-selectable for edge- or level-sensitive mode. Users can configure edge-sensitive mode for either rising or falling edge. In level-sensitive mode, the trigger can be configured for either high or low level. The default setting at power up is edge sensitive, rising edge.

Eight bidirectional digital I/O lines are individually configurable for input or output. The DIO terminals can detect the state of any TTL-level input. Users can configure for pull-up (+5 V) or pull-down (0 V) with an onboard jumper.

Two 32-bit event counters are provided to count TTL pulses. The counters accept inputs of up to 20 MHz.

A PWM timer output generates a pulse output with a programmable frequency in the range of 0.0149 Hz to 32 MHz. The timer output parameters are software selectable.

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[®], Linux[®], and Python[™].


Key Search Terms: Measurement Computing, DAQ, data acquisition, USB DAQ, high-speed DAQ, multifunction, differential, analog, TTL, C++, C#, Visual Basic.Net, DASyLab, LabVIEW, MATLAB, Python

Video Link: N/A

Datasheet: <https://www.mccdaq.com/PDFs/specs/USB-1608G-Series-data.pdf>

Demo / Project Links:

- [MCC Software Overview](#)
- [MCC Software Downloads](#)
- [MCC example programs](#)
- [USB-1608GX Manual](#)
- [USB-1608GX-2AO Manual](#)

<p>Features</p> <ul style="list-style-type: none"> • 16 SE/8 DIFF analog inputs • 16-bit resolution • 500 kS/s sample rate • ± 10 V, ± 5 V, ± 2 V, ± 1 V input ranges • Two analog outputs (USB-1608GX-2AO only) • Eight digital I/O • Two counter inputs • One timer output • No external power required. USB cable is included 	<p>Product Image</p> 
<p>3 Target Applications</p> <ul style="list-style-type: none"> • NA 	<p>Image Links:</p> <ul style="list-style-type: none"> • https://drive.google.com/file/d/10sZvpHKpvPx3y462iHx0oOf25OnY53zk/view?usp=sharing • https://drive.google.com/file/d/1goav3m97E-Gv7lhCbHYFOyQkt047zwtN/view?usp=sharing • https://drive.google.com/file/d/1c_uUZQUVOgoA0WFATL38M6WrEFw8x4Pq/view?usp=sharing <p>Related Products</p> <ul style="list-style-type: none"> • MCC USB-231 (PN: 6069-410-012) • MCC USB-234 (PN: 6069-410-013) • MCC USB-1808X (PN: 6069-410-014)