



Application Note #1253

Changes in the DB-28040 Hardware

Due to component obsolescence, Galil has been forced to redesign the DB-28040. There are some differences between the new version and previous versions. This document will detail those differences.

ADC: The ADC used on the DB-28040 hardware revisions A-D is no longer available. Galil has switched to a new ADC with similar specifications. This new ADC provides additional features that will be enabled in future firmware versions. The additional features will be enabled with the AQ command. There are slight electrical differences between the two ADC's. These differences are detailed in the following table:

Input Impedance

<u>Input Range</u>	<u>RevA-D</u>	<u>RevE</u>
+/-10V	46K	31K
+/-5V	N/A	31K
0-10V	N/A	42K
0-5V	20K	42K

CPLD: The CPLD used on the DB-28040 was updated with a more modern family. This new CPLD is available with more capacity and will allow for more complex specials. The most significant difference is that the new CPLD is no longer 5V tolerant, if 5V compatibility is required the DB-28040 Rev E **MUST** be ordered with the 5V option. The following table details the CPLD related differences:

I/O Drive

<u>Configuration</u>		<u>RevA-D</u>	<u>RevE</u>
3.3V (default)	Source	4mA	4mA
	Sink	4mA	4mA
5V	Source	5K P/U	20mA
	Sink	4mA	20mA

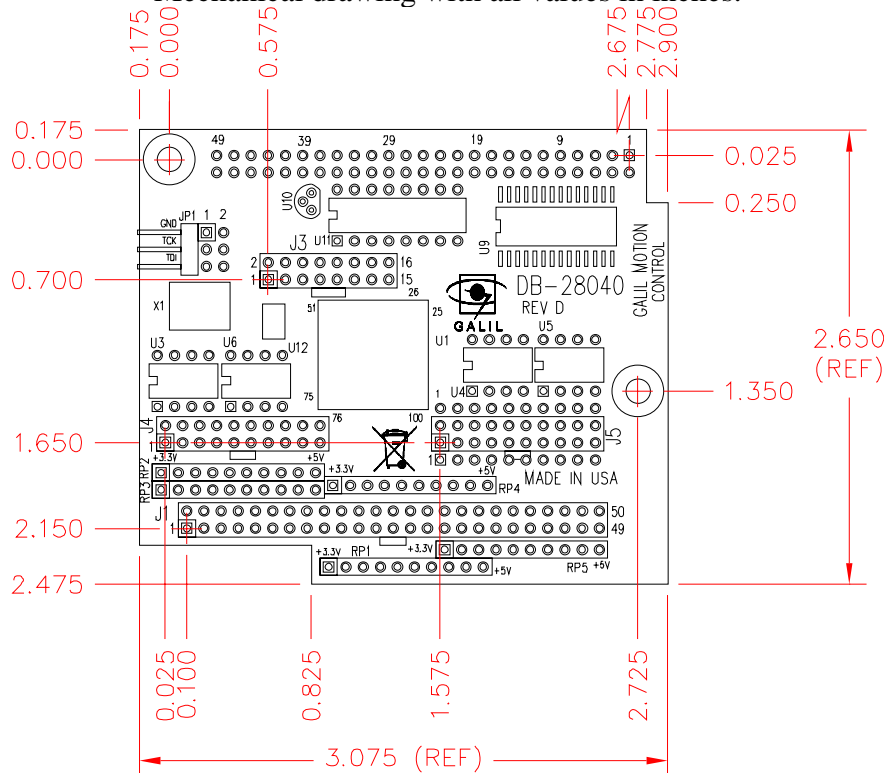
Available I/O Configuration

		<u>RevA-D</u>	<u>RevE</u>
3.3V (default)	I/O (total)	40	40
	Inputs (max)	40	40
	Outputs (max)	40	40
5V	I/O (total)	40	40
	Inputs (max)	40	40
	Outputs (max)	24	40
3.3V SSI (8-axis)	I/O (total)	32	32
	Inputs (max)	32	32
	Outputs (max)	24	32
3.3V SSI (4-axis)	I/O (total)	N/A	40
	Inputs (max)	N/A	40
	Outputs (max)	N/A	40
5V SSI (8-axis)	I/O (total)	N/A	32
	Inputs (max)	N/A	32
	Outputs (max)	N/A	32
5V SSI (4-axis)	I/O (total)	N/A	40
	Inputs (max)	N/A	40
	Outputs (max)	N/A	40

Product Drawings/Schematics

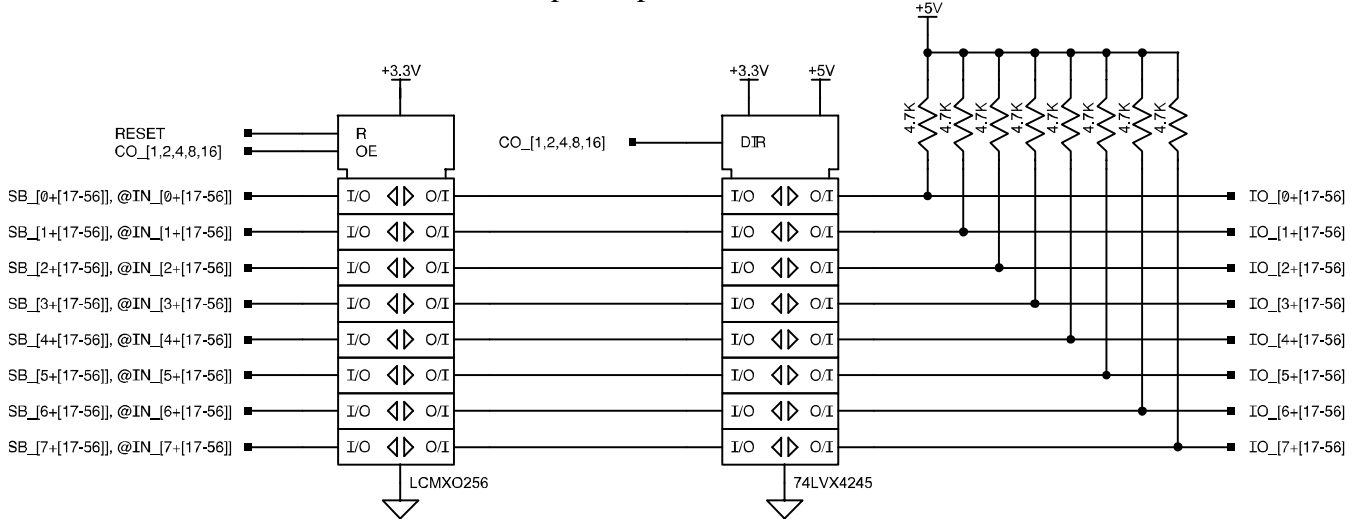
DB-28040 Hardware Revisions A-D

Mechanical drawing with all values in inches.



DB-28040 Rev E 5V

Schematic of I/O points provided to user



DB-28040 Rev A-D 3.3V/5V

Schematic of I/O points provided to user

