

I2C 3.3V and 5V Busses

MK-33910

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IONOTRONICS Corporation

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1 Introduction

The 3.3V and 5V I2C Bus and Supply provides for multiple I2C device bussing and combination of 3.3V and 5 V I2C devices. The I2C bus system also provides 3.3V and 5V Supply from a 6V or 12V supply. Figure 1 shows a top view of the MK-33910.

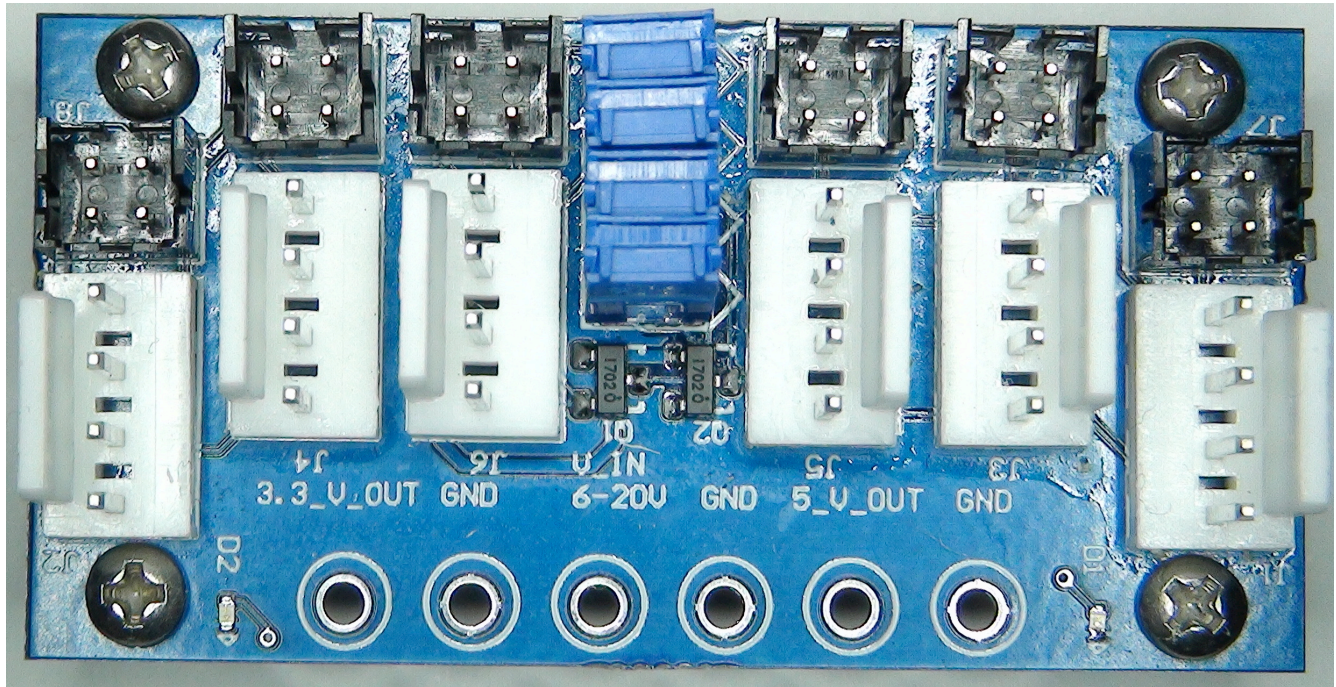


Figure 1 MK-33910

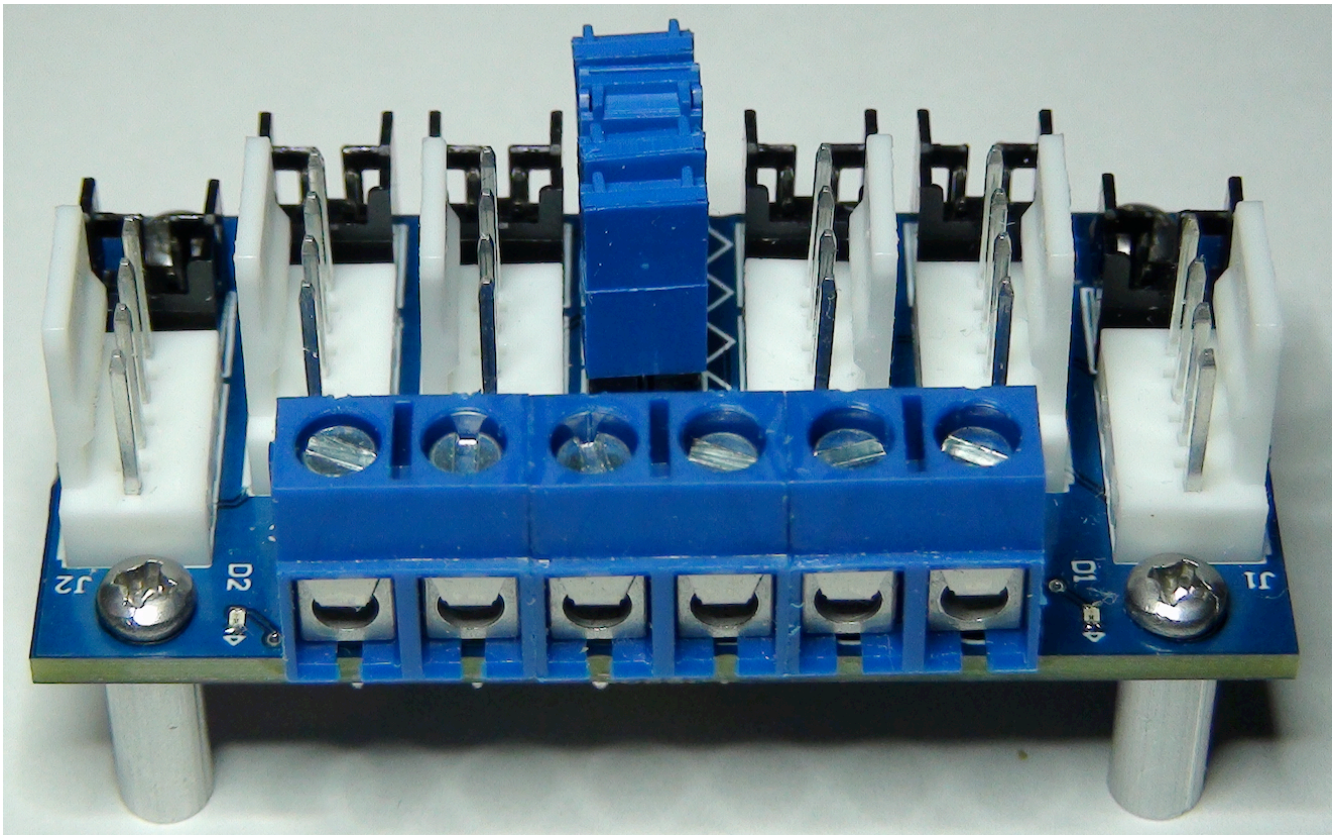


Figure 2 View with Supply Terminals and Standoffs

2 Specifications

- I2C Bus Support for 3.3V and 5V
- Voltage Regulator 3.3V and 5V (e.g. 12V input)
- Molex I2C Connectors for 3.3V and 3 Molex I2C Connectors for 5V
- 4-pin Hirose I2C Connectors for 3.3V and 3 4-pin Hirose I2C Connectors for 5V
- Provides 3.3V and 5 V Supply for Electronic Devices (e.g. Eororaptor with SoC and WiFi)

3 Overview

The MK-33910 provides two I2C busses. One bus supports 3.3V supply and the other bus supports 5V supply. The board has two on-board voltage regulators. The input supply voltage can range from 6V to 12V DC.

Figure 3 shows the two busses and associated supply voltage.

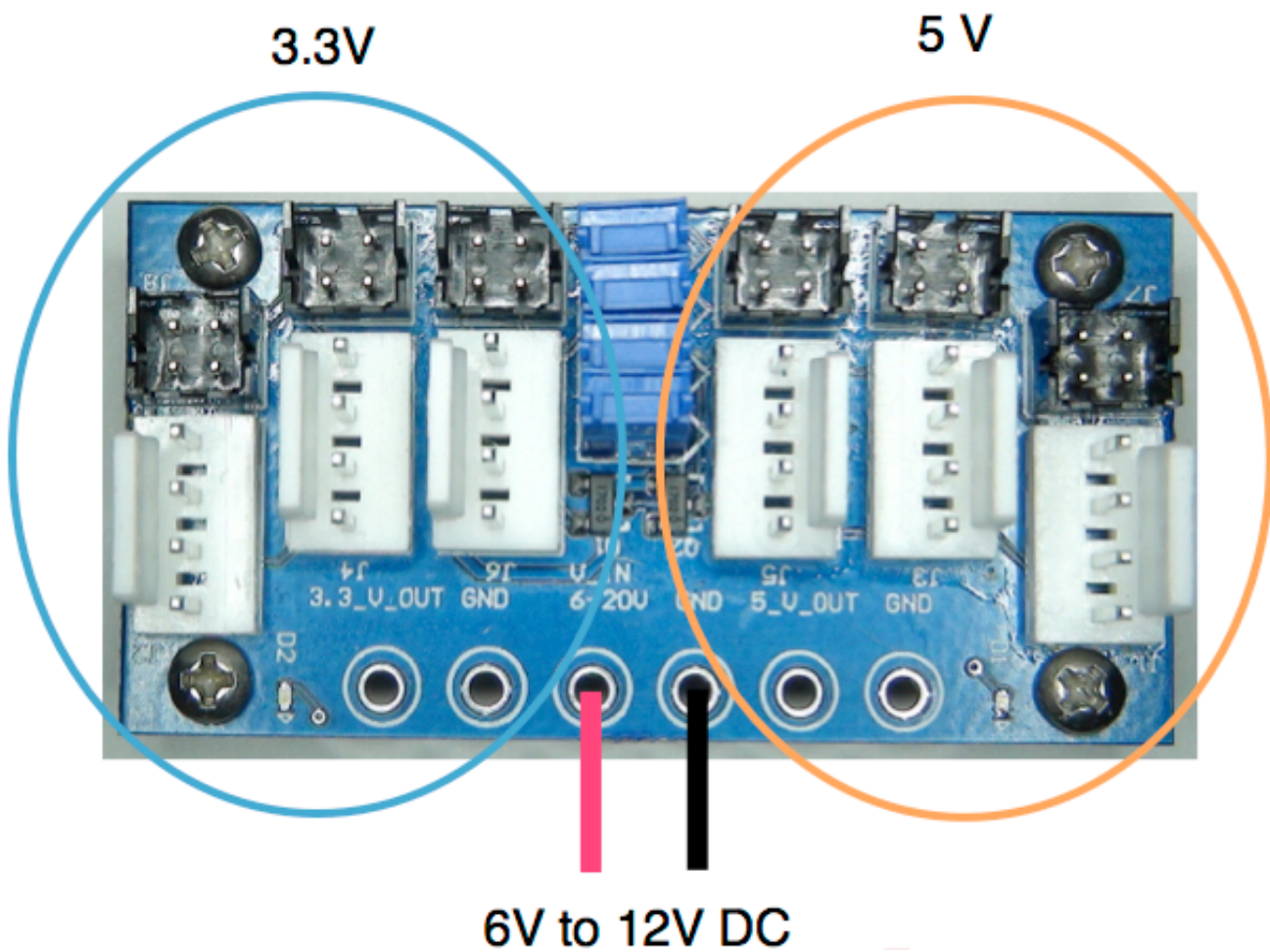


Figure 3 MK-33910 Buss Supply Voltages

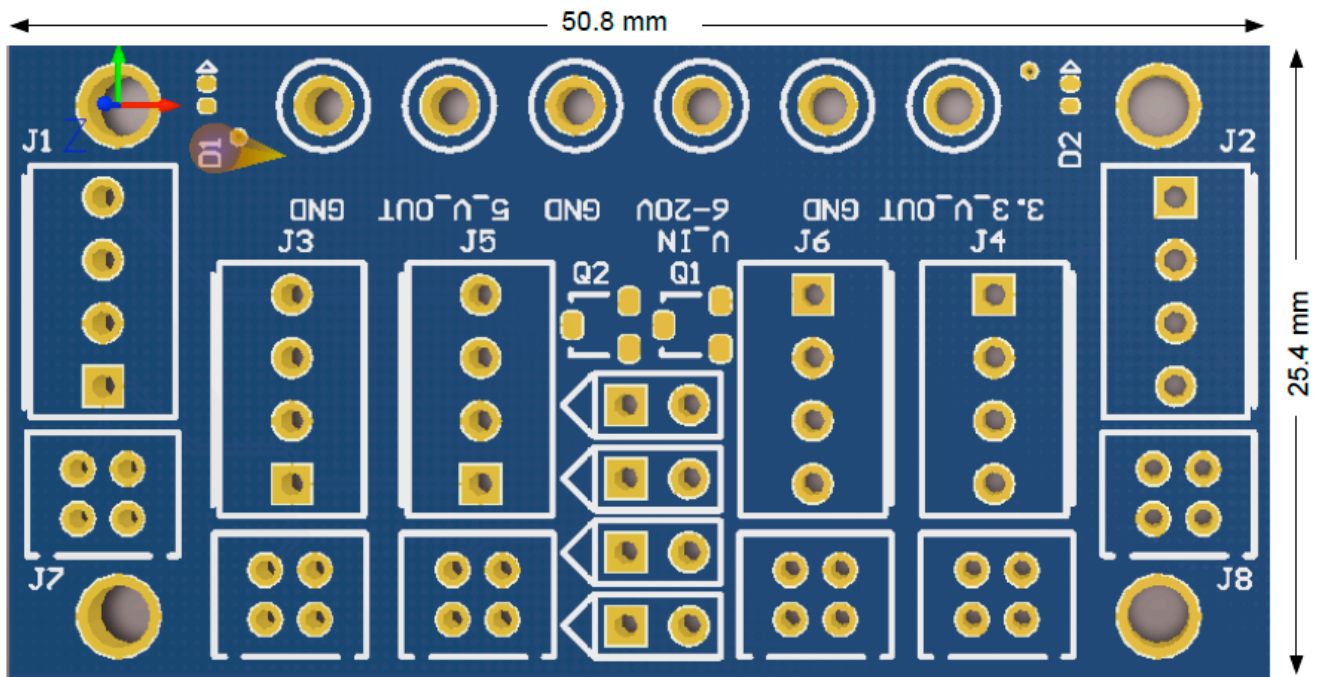


Figure 4 MK-33910 Board Dimensions

4 Connections

The MK-33910 supports two types of connectors. A four pin Molex connector and a small footprint 4 pin DF11 Series Hirose connector. Each bus therefore supports 6 connectors. These connectors can also be used to supply 3.3V or 5V to various devices as well as to I2C devices.

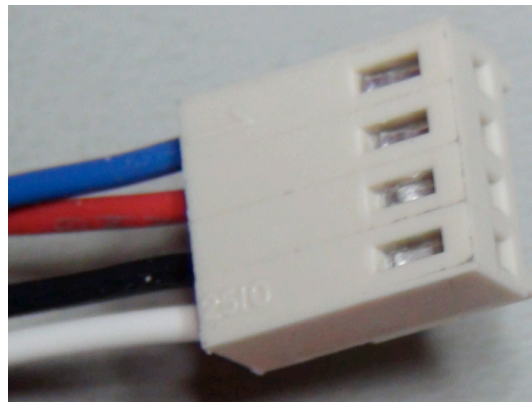


Figure 5 Molex 4 Pin I2C Header

4 Pin Molex Connector

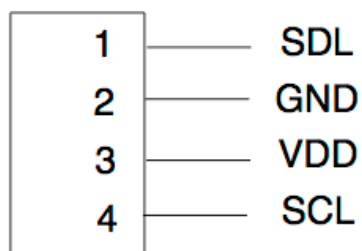


Figure 6 4 Pin Molex I2C Connector



Figure 7 Hirose DF11 4 Pin Series I2C Bus Connector

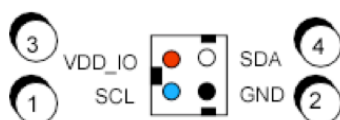


Figure 8 I2C Pin Specifications DF11 4 Pin Hirose Connector

5 Schematics

Figures 9 and 10 show the schematics for the MK-33910.



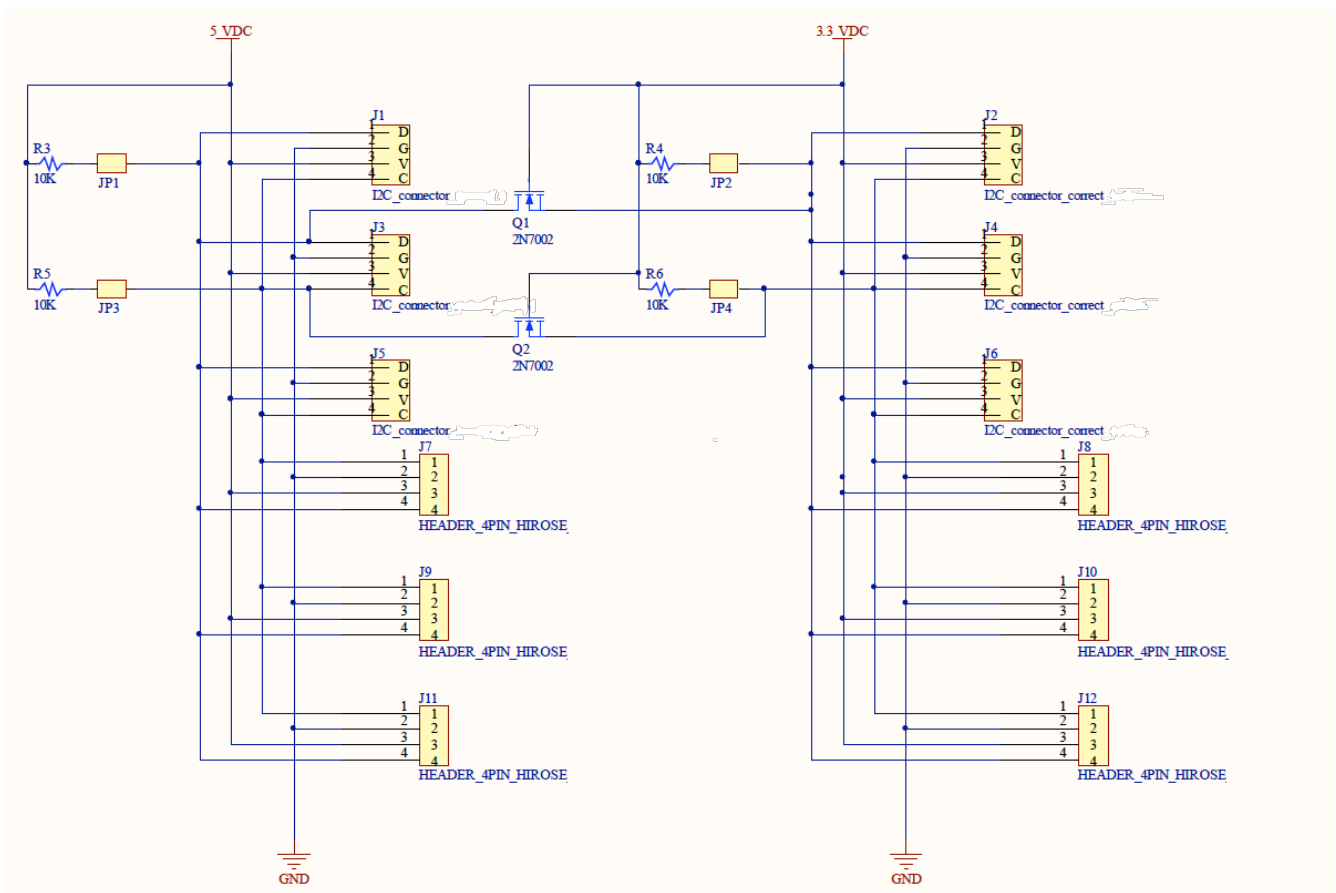


Figure 10 3V and 5V I2C Busses

6 Hirose DF11 Series Connectors

Figure 11 shows a 12 pin Hirose DF11 Series connector. This is useful when building cabling systems. Note pin 1 marker and numbering scheme.

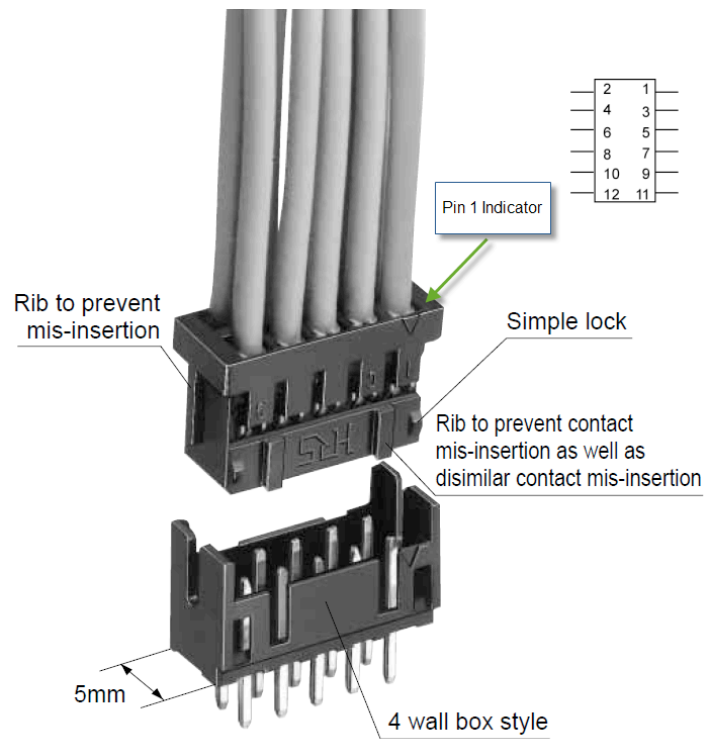


Figure 11 Guide to the Hirose DF11 series connector

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