Aardvark I2C/SPI Host Adapter Quick Start Guide

Introduction

These getting started guidelines are intended to facilitate the first use of the Aardvark adapter. The Aardvark adapter can be used with Control Center, Flash Center or the Aardvark API to communicate with any standard I2C/SPI device. Use the Aardvark adapter with Control Center, and follow the instructions below to communicate with a standard I2C/SPI device.

All current downloads for the Aardvark adapter can be found on the product page (https://www.totalphase.com/products/aardvark-i2cspi/).

Getting Started Guidelines

1. Download and run the latest version of the Total Phase USB Drivers Installer. {USB Drivers - Linux (http://www.totalphase.com/products/usb-drivers-linux)} {USB Drivers - Windows (http://www.totalphase.com/products/usb-drivers-windows)}
2. Connect the Aardvark adapter to the PC via the USB connector.
3. Download and unzip the latest version of Control Center; select Windows, Linux, or Mac OS X (https://www.totalphase.com/products/control-center-serial/). (? (/support/articles/200525013/#s2.2))
4. Launch Control Center. (? (/support/articles/200525013/#s2.3))
5. Connect to the Aardvark adapter. (? (/support/articles/200525013/#s2.4))
    a. Click Configure Aardvark Adapter.
    b. Select the Aardvark Adapter.
    c. Click OK to connect to the adapter.
6. Connect the adapter's 10-pin header to the target system. (? (/support/articles/200468316/#s2.1))
    a. If you have the Beagle I2C/SPI Host analyzer and the I2C/SPI Activity Board, you can use these tools to setup a target system to test the capabilities of the devices. For additional information, take a look at the Beagle analyzer user manual (/support/articles/200472426/) and the I2C/SPI activity board user manual (/support/articles/200473206-i2c-spi-activity-board-user-manual).
7. The Aardvark adapter is capable of communicating with I2C or SPI traffic in Master or Slave mode. Depending on the system requirements, configure the device accordingly.
    a. Click Aardvark, and choose I2C+SPI.
    b. Optionally, click Aardvark, and enable I2C Pulls-Ups and/or Target Power.
    c. Configure the Device Settings for I2C-Master using the I2C Control panel. (? (/support/articles/200525013/#s4.1))
        i. Configure the bitrate.
        ii. Click on the Master tab.
        iii. Supply the 7-bit I2C Slave Address. (? (/support/articles/200349176/))
        iv. Optionally, configure 10 Bit Addr, No Stop, Number of bytes, and Message based on the parameters of the target system.
        v. Click Master Write or Master Read based on the target system application.
    d. Configure the Device Settings for I2C-Slave using the I2C Control panel. (? (/support/articles/200525013/#s4.1.3))
        i. Click on the Slave tab.
        ii. Supply the 7-bit I2C Slave Address.

iii. Optionally, Max Tx Bytes, Max Rx bytes, and Slave Response Message based on the parameters of the target system.

iv. Click Set Resp. if setting a slave response.

v. Click Enable to activate the adapter as an I2C slave.

e. Configure the Device Settings for SPI-Master using the SPI Control panel. (?(/support/articles/200525013/#s4.2))

i. Configure the bitrate.

ii. Click on the Master tab.

iii. Configure the Bitrate, Polarity, Phase, Bit Order, SS Polarity, and MOSI Message based on the parameters of the target system.

iv. Click Send to shift out the MOSI message on the SPI bus.

f. Configure the Device Settings for SPI-Slave using the SPI Control panel. (?(/support/articles/200525013/#s4.2.3))

i. Click on the Slave tab.

ii. Configure the Bitrate, Polarity, Phase, Bit Order, and MISO Message based on the parameters of the target system.

iii. Click Set MISO message if setting a slave response.

iv. Click Enable to activate the adapter as an SPI slave.

8. Monitor the transactions in the Transaction Log.

Notes

For additional information, take a look at the Aardvark adapter user manual (/support/articles/200468316/), and Control Center manual (/support/articles/200525013/).

Related articles

- Aardvark I2C/SPI Host Adapter User Manual (/support/articles/200468316-Aardvark-I2C-SPI-Host-Adapter-User-Manual)
- Control Center Serial Software User Manual (/support/articles/200525013-Control-Center-Serial-Software-User-Manual)
- Interfacing with 3-wire SPI (/support/articles/200350046-Interfacing-with-3-wire-SPI)
- Beagle Protocol Analyzer User Manual (/support/articles/200472426-Beagle-Protocol-Analyzer-User-Manual)
- Programming I2C EEPROM using Aardvark Adapter and Control Center Serial Batch Mode on Linux Ubuntu 14.04 64 bit (/support/articles/215768217-Programming-I2C-EEPROM-using-Aardvark-Adapter-and-Control-Center-Serial-Batch-Mode-on-Linux-Ubuntu-14-04-64-bit)