Aardvark™

I2C/SPI Host Adapter



Key Features

USB to I2C/SPI Interface

- Master or slave emulation
- EEPROM/Flash programming
- I2C speeds up to 800 kHz
- SPI speeds up to 8 MHz
- GPIOs available
- In-system or stand-alone programming

Control Center Software

- Simplified transmission of I2C and SPI messages
- Automate tasks with XML-based batch scripts

Flash Center™ Software

- Extensible XML-based parts library with built-in support for EEPROMs and Flash memory

Aardvark API

- Create custom software applications
- Example files included
- Cross-platform support for Windows, Linux, macOS

USB Bus-Powered

- Portable
- No extra power adapters needed

Quality

- CE, REACH, RoHS
- Manufacturing: ISO 9001, ISO 13485, AS9100C, ITAR
- One year warranty

An ever-wider array of devices and the increasing pressure to minimize costs means that you need to get the most out of your embedded systems interface tools - and the Aardvark™ I2C/SPI Host Adapter is expressly designed to enable your competitive edge.

Our most popular product, the Aardvark I2C/SPI Host Adapter, is a fast and powerful USB-to-I2C/SPI bus host adapter. It helps you to focus on your core competencies by deploying customized solutions with minimal engineering overhead. With its ability to emulate a master or slave, communicate in I2C or SPI, the Aardvark I2C/SPI Host Adapter is a versatile tool well-suited to a variety of applications.

Prototyping

- Emulate a master or slave to quickly create a protoype embedded system
- Evaluate peripherals such as sensors and memory chips, quickly and easily

Production and Testing

- Program firmware and other data in production environment
- Run automated tests

Bundling

- Provide end-customers with easy access to I2C/SPI lines of your device

Prototyping Use Case

Create working prototypes quickly and easily with the Aardvark I2C/SPI adapter. As a master, it can emulate an MCU to actively poll sensors, write and read from EEPROMs, and control the bus.

Production Use Case

Seamlessly integrate the Aardvark I2C/SPI adapter into your production environment. Using the API or LabVIEW VIs allows the user to build software applications customized for their production line. For example, the Aardvark I2C/SPI adapter can be configured to program firmware onto EEPROMs, read data from specific registers, and run automated tests scripts.

Aardvark™ I2C/SPI Host Adapter

Applications

Memory Programming
EEPROMs
Flash

Sensors
Accelerometers
Pressure
Temperature
Light

Industrial and Home Automation
Motor controls
Lighting controls

Audio Processing
Converters
Signal Processing

Scan for Video

Specifications

Software

The Control Center Software provides quick and easy access to all features of the Aardvark I2C/SPI Host Adapter. The Flash Center software enable users to easily read and write to I2C- and SPI-based memory.

Control Center Software Features

- Streamlined user interface for configuation of I2C, SPI, and GPIOs at the click of a button
- I2C and SPI messages can be saved and loaded from binary files
- XML-based batch scripting for automating repetitive read and write commands with built-in help system

Flash Center Software Features

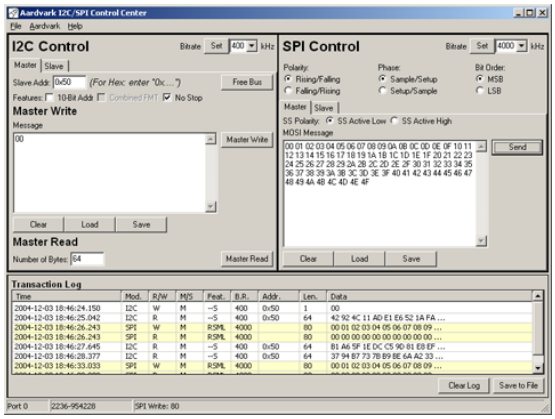
- Easily program, read, and write to I2C and SPI EEPROMs and flash memory

Aardvark API and LabVIEW Support

- Create custom applications using the flexible, powerful, and well-documented Aardvark API
- 32- and 64-bit support for C/C++/C#, Python, .NET, VB.Net, VB 6
- LabVIEW Instrument drivers

Operating Systems Supported (32-bit and 64-bit)

- Windows: 7, 10, 11, and later
- Linux: Red Hat, Ubuntu, Fedora, SuSE
- macOS: 13 and later



Control Center: I2C and SPI Modules in use

Hardware

Bit Rate

- I2C Master: 1 kHz - 800 kHz
- SPI Master: 125 kHz - 8MHz
- SPI Slave: 0.1 MHZ - 4 MHz

Target Bus Interface

- I2C Master/Slave
- SPI Master/Slave
- Up to 6 GPIO pins

Host Bus Interface

- USB 1.1
- Type B receptacle

Target Bus Cable

- 10-pin ribbon cable
- 1.27 mm (0.05") pitch
- 130.175 mm (5 1/8") length

Target Bus Connector

- Type: 2x5 IDC female, 2.54 mm (0.10") pitch
- Pinout
  - Power Pins: GND (Pins 2, 10), NC/+5V (Pins 4, 6)
  - I2C Pins: SCL (Pin 1), SDA (Pin 3)
  - SPI Pins: MISO (Pin 5), SCLK (Pin 7), MOSI (Pin 8), SS (Pin 9)
  - GPIO Pins: 1, 3, 5, 7, 8, 9

DC Characteristics

- Target Power: +5V, 25mA max
- I2C/SPI Signal: 3.3V, 10mA

Dimensions (W x D x L)

- 55.6 x 22.2 x 89 mm (2.19" x 0.87" x 3.5")

Weight

- 64 g (0.14 lbs)

Operating Temperature

- 10 to 35 °C (50 to 95 °F)

Ordering information

Aardvark I2C/SPI Host Adapter	
Part Number	TP240141
Country of Origin	USA
HTS	8543200000
ECCN	EAR99

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