

# Cheetah™ SPI Host Adapter



## Key Features

### USB to SPI Interface

- 40+ MHz SPI master
- Flash/EEPROM programming
- 3 slave selects
- Pipelined architecture for gapless shifting
- Precise timing and user-insertable delays
- In-system or stand-alone programming

### Flash Center™ Software

- Extensible XML-based parts library with built-in support for many SPI Flash memories and EEPROMs
- Gang-programming with multiple Cheetah adapters

### Cheetah GUI Software

- Simplified transmission of SPI messages

### Cheetah API

- Create custom software applications
- Example files included
- Cross-platform support for Windows, Linux, Mac OS X

### USB Bus-Powered

- Portable
- Field-deployable
- No extra power adapters needed

### Quality

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

With the ever-increasing speed of SPI devices and the pressure to minimize programming time, you need to get the most performance out of your embedded systems interface tools - and the Cheetah™ SPI Host Adapter is expressly designed to enable your competitive edge.

The Cheetah SPI Host Adapter is a fast and powerful USB-to-SPI host adapter, capable of communicating at up to 40+ MHz. It is an ideal tool to develop, debug, and program SPI applications, helping you to focus on core competencies by minimizing debugging and programming time.

### Memory

- Program SPI flash chips and EEPROMs at up to 40+ MHz
- Program almost any SPI-based memory with the XML-based parts library in Flash Center

### Prototyping

- Emulate a master to quickly create a high-speed SPI embedded system prototype
- Evaluate peripherals such as memory chips and sensors, quickly and easily

### Bundling

- Provide end-customers with easy access to your SPI device

### Programming Use Case

Program SPI Flash memory quickly and easily using the Cheetah adapter and Flash Center software. Many applications store their BIOS in fast-booting Flash memory. The Cheetah adapter allows engineers to quickly program BIOS updates such as updated versions and fixes to virtually almost any make of memory, due to the Flash Center's extensible, XML-based parts library.

### Prototyping Use Case

Create SPI prototypes quickly and easily with the Cheetah adapter. As a master, it can emulate an MCU to actively poll high-speed SPI sensors, write and read from on-board flash BIOS, and actively control the bus.

# Cheetah™ SPI Host Adapter

## Applications

<b>Memory Programming</b> Flash EEPROMs	<b>Communications</b> Ethernet controllers Navigation GPS modules Motor control	<b>Audio/Visual</b> Audio codecs Display/touch controllers Signal Processing	<b>Sensors</b> Touch Pressure Temperature
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## Specifications

### Software

The Flash Center™ Software and Cheetah GUI provides quick and easy access to all features of the Cheetah SPI Host Adapter.

#### Flash Center Software Features

- Quickly and easily program, erase, and verify SPI-based Flash and EEPROMs
- Interface with almost any memory chip with the XML-based parts library

#### Cheetah GUI Features

- Streamlined user interface for configuration of SPI at the click of a button
- User-insertable delays

#### Cheetah API and LabVIEW Support

- Create your own custom applications using the flexible, powerful, and well-documented Cheetah 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: XP, Vista, 7, 8, 8.1
- Linux: Red Hat, SuSE, Ubuntu, Fedora, Arch, CentOS, Debian
- Mac OS X: 10.4-10.9

### Hardware

#### Bit Rate

SPI Master: 0.1 MHz - 40+ MHz

#### Target Bus Interface

SPI Master

#### Host Bus Interface

USB 2.0

Type B receptacle

#### Target Bus Cable

10-pin ribbon cable  
 1.27 mm (0.05") pitch  
 25.4 mm (1") 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)  
 SPI Pins: SS2 (Pin 1), SS3 (Pin 3), MISO (Pin 5), SCLK (Pin 7), MOSI (Pin 8), SS1 (Pin 9)

#### DC Characteristics

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

#### Dimensions (W x D x L)

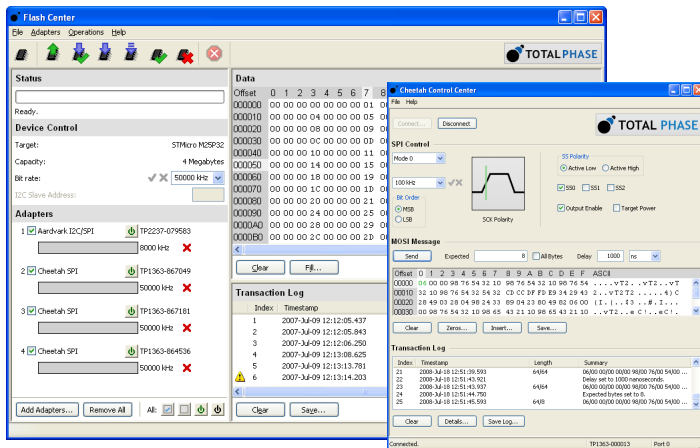
55.6 x 22.2 x 89 mm (2.19" x 0.87" x 3.5")

#### Weight

64 g (0.14 lbs)

#### Operating Temperature

10 to 35 °C (50 to 95 °F)



Flash Center

Cheetah GUI

Ordering information	
Cheetah SPI Host Adapter	
Part Number	TP280121
Country of Origin	USA
HTS	8543200000
ECCN	EAR99

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