

# Promira™ Serial Platform

## Key Features

### USB/Ethernet to I2C/SPI/eSPI Interface

- I2C M/S up to 3.4 MHz
- SPI M/S up to 80/20 MHz
- eSPI simulator up to 66 MHz
- eSPI analyzer up to 66 MHz
- Dual and Quad I/O SPI/eSPI
- Integrated level shifting
- Ethernet and high-speed USB interface
- Up to 16 GPIOs
- Up to 8 slave selects
- Windows, Linux, Mac OS X

### Control Center Software

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

### Data Center Software

- eSPI Protocol Analysis
- Real-time display, search and filtering of captured data
- Flexible Triggers

### Flash Center Software

- Extensible XML-based parts library with built-in support for EEPROMs and flash memories

### Promira API

- Create custom software applications
- Configure and utilize GPIOs
- Configure Target Power via API
- Example files available
- Queue-based architecture

### Quality

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



As the number of embedded applications grow and as their requirements increase in complexity, the need for more powerful and flexible embedded systems tools is more important than ever. The Promira Serial Platform can fill the gap and be used to design, debug and develop in a multi-faceted manner.

The Promira Serial Platform is the world's first I2C/SPI master or slave with eSPI simulator and protocol analysis capabilities.

Built on a completely new FPGA-based architecture, the Promira platform is the latest tool in Total Phase's established line of cost-effective and easy-to-use embedded solutions. Each Promira platform includes a full software suite including powerful GUIs and APIs for a variety of applications.

Every Promira platform comes standard with integrated level-shifting, as well as Ethernet and USB control interfaces. The Promira platform is ready to accomplish any task you set it to.

### Production and Automated Testing

- Program firmware and other data in production environment
- Exercise DUTs and run regression tests
- Interface to production line using USB or Ethernet

### Programming

- Burn firmware to EEPROMs
- Program in-system I2C- or SPI-based memory chip

### Prototyping

- Master or slave emulation
- Use as master to interface with sensors, memory chips and other peripherals
- Use as slave to test commands sent from MCUs

### Production Use Case

Use the Promira platform in a production line to program firmware onto EEPROMs using the API. The Ethernet interface can be used to extend the range beyond that of USB and interface multiple units to a PC.

### Prototyping Use Case

Create working prototypes quickly and easily using the Promira platform. Used as a master, it can emulate an MCU to actively poll sensors, write and read from BIOS memory and control the bus. As a slave, it can be used to simulate sensors and test the validity of commands being sent by the master.

# Promira™ Serial Platform

## Applications

<b>Memory Programming</b> EEPROMs Flash  <b>Motherboard bring-up</b> Analyze eSPI traffic Emulate Master/Slave	<b>Sensors</b> Accelerometer Pressure Temperature Light	<b>Industrial &amp; Home Automation</b> Motor control Lighting control	<b>Factory Automation</b> Production programming Automated testing
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## Specifications

### Software

#### Control Center Software

- Streamlined user interface for configuration 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
- Level Shifting: 0.9 – 3.45 V, 5 V

#### Data Center Software

- LiveDisplay™ Technology - View eSPI traffic as it is generated on the bus in true real time, save time debugging
- LiveFilter™ Tool - Filter for and against specific channels, errors, device addresses, data patterns, and more
- LiveSearch™ Tool - Find text, hexadecimal, and ASCII data quickly
- Hierarchical View - Enhanced readability with data intuitively grouped into expandable and collapsible transactions
- Bus Pane - See detailed device information including addresses, configurations, and more

#### Flash Center Software

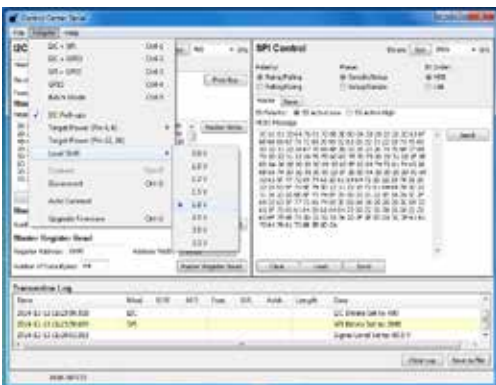
- Easily program, read, and write to I2C and SPI EEPROMs and flash memory
- Level Shifting: 0.9 – 3.45 V, 5 V

#### Promira API Support

- 32- and 64-bit support for C/C++/C#, Python, .NET
- Create custom applications using the flexible, powerful, and well-documented Promira API

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

- Windows: 7, 8, 8.1, 10
- Linux: Red Hat, Ubuntu, Fedora, SuSE
- Mac OS X: 10.7 – 10.14



Control Center: I2C and SPI modules, with integrated level-shifting

### Hardware

#### Host Adapter

	Master	Slave
I2C	1 MHz – 3.4 MHz	1 MHz – 3.4 MHz
SPI	12.5 MHz – 80 MHz	8 MHz – 20 MHz
eSPI	20 MHz – 66 MHz	N/A

#### Analyzer

eSPI	20 MHz – 66 MHz	2 chip selects with reset alert
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#### Target Bus Interface

- I2C or SPI Master/Slave
- eSPI Simulator
- eSPI Protocol Analyzer
- Up to 16 GPIO pins
- Up to 8 Slave selects

#### Host Bus Interface

- USB 2.0 Micro B receptacle
- 10/100/1000 Ethernet receptacle

#### DC Characteristics

- Target Power: 5 V/3.3 V, 100 mA max
- I/O Power: 0.9 – 3.45 V, 100 mA max
- I2C/SPI/GPIO Signal: 0.9 – 3.45 V, 10 mA max
- eSPI Signal and DIO: 1.8 V

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

- 77.5 x 29.2 x 115.6 mm (3.05 x 1.15 x 4.55 in)

#### Weight

- 155 g (0.34 lbs)

#### Operating Temperature

- 10° – 35° C (50° – 95° F)

## Learn more.

[www.totalphase.com/promira](http://www.totalphase.com/promira)

### Ordering Information

Promira Serial Platform	
Part Number	TP500110
Country of Origin	USA & Mexico
HTS	8543200000
ECCN	EAR99

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