



Total Phase has expanded the functionality of the Beagle I2C/SPI Protocol Analyzer by adding the ability to monitor the MDIO bus at up to 20 MHz.

The versatile Beagle™ I2C/SPI/MDIO Protocol Analyzer is the ideal tool for the embedded engineer who is developing an I2C, SPI, or MDIO based product. The Beagle analyzer provides a high performance monitoring solution in a small, portable package. Perfect for engineers in the field and in the lab.

For existing customers of the Beagle I2C/SPI Protocol Analyzer, the new MDIO feature is a free upgrade which is part of the version 1.30 of the Beagle Data Center software is released.

Features

- Non-intrusive MDIO monitoring up to 20 MHz (Clause 22 and Clause 45)
- Non-intrusive I2C monitoring up to 4 MHz
- Non-intrusive SPI monitoring up to 24 MHz[†]
- Real-Time Data Capture and Display - Watch MDIO, I2C, and SPI packets as they occur on the bus.
- Bit-level timing down to 20 ns resolution.
- Fully Linux and Windows compatible
- Includes full function monitoring tools
- Low Cost

[†] Actual SPI capture performance is dependent on CPU speed and SPI bus throughput. 24 MHz SPI capture has been tested for typical applications (e.g., captures of a few hundred SPI packets). Depending on user configuration, the maximum achievable capture throughput for continuous streaming applications may be less than 24 MHz.

Non-intrusive I2C, SPI, and MDIO monitoring

The Beagle analyzer has high-impedance inputs so it will not affect the system under test and distort the results. Simply attach the Beagle I2C/SPI/MDIO inline to passively monitor target devices.

Nearly Limitless Capture

Captured data is streamed via High-Speed USB directly to your computer. The amount of data captured is limited only by the amount of physical memory that is available on the machine.

Bit-Level timing

Not only can you get timings for an entire packet, it is also possible to get timing for each individual bit in the packet. The Beagle analyzer can return bit-level timing down to a 20 ns resolution.

High-Speed USB 2.0



The Beagle monitor is a bus-powered, High-Speed USB 2.0 device. This provides two major benefits. As a high speed device, all the data captured by the Beagle monitor are transferred to the test computer at 480 Mbps. As a bus-powered device, the Beagle monitor does not require a power adapter. This makes the Beagle monitor the ideal tool for engineers in the field. Just plug it into a High-Speed USB 2.0 port on your laptop and you are ready to go.

Rosetta Language Bindings - Development API

- Develop custom solutions in C/C++, C#, VB, .NET, and Python
- Clean API is well-documented and easy to integrate
- Fully Linux and Windows compatible
- Royalty-free API can be used without licensing fees
- No extra development kit to buy, you can download www.totalphase.com it before you even buy a Beagle I2C/SPI/MDIO Protocol Analyzer.

Low Cost

No Hidden Fees

The Beagle I2C/SPI/MDIO Protocol Analyzer comes complete with software. There are no additional yearly support contracts. There are no fees for software updates.

This low price means that it is immediately affordable for a company to provide every developer with their own analyzer.

The benefits of the Beagle analyzer's low cost are:

- **Less time wasted**
because developers do not have to share analyzers or go to the lab to debug simple problems
- **Shorter development cycles**
because developers can identify and fix problems quickly and easily
- Less wasted time means
higher productivity

Future-Proof

The Beagle monitor is completely field-upgradable via USB. Total Phase is committed to improving the Beagle analyzer and making these improvements available to our customers free of charge. There are no yearly support contracts and no software update fees.

Updates will be available for download from our website's www.totalphase.com Downloads section.

Beagle Data Center Software



The Beagle Data Center Software is a graphical front-end that is included with the Beagle analyzer.

Features include:

- Interactive filtering by token, packet, address, endpoint
- arbitrary data patterns
- Packet and Descriptor decoding
- Real-time data capture and display

Compatibility



The Beagle monitor was engineered from the very beginning to be a cross-platform device. The complete functionality of the Beagle monitor is available on Linux and Windows operating systems.

What is Included

Every unit comes complete with the following items:

- Beagle I2C/SPI/MDIO unit
- (1) 6 foot USB A->B cable
- Software CD
 - Windows USB Drivers
 - Linux USB Hot Plug Configuration files
 - Beagle Data Center Software
 - Datasheets
 - Documentation

You will never have to worry about being out of step with the latest software features. Software and firmware upgrades are always freely available in the www.totalphase.com Downloads section.

Related Products

Name	Description
I2C Development Kit TP120111	The I2C Development Kit is a comprehensive and cost-effective kit that bundles together a complete set of Total Phase's industry-leading I2C development tools and popular accessories.
SPI Development Kit TP120211	The I2C Development Kit is a comprehensive and cost-effective kit that bundles together a complete set of Total Phase's industry-leading I2C development tools and popular accessories.
Aardvark I2C/SPI Host Adapter TP240141	Connect your Windows or Linux PC to I2C and SPI bus through USB with the Aardvark I2C/SPI Host Adapter. Multi-master, slave, and GPIO are featured in this versatile development and testing tool.
Cheetah SPI Host Adapter TP280121	The Cheetah SPI Host Adapter is a high-speed SPI adapter that is capable of communicating over SPI at up to 40+ MHz.
10-Pin Split Cable TP240211	10-Pin Split Cable makes it easy to connect your Aardvark I2C/SPI Host Adapter or Beagle I2C/SPI/MDIO Protocol Analyzer to your target with individual flying leads.
10-Pin Grabber Clip Split Cable TP240410	10-Pin Grabber Clip Split Cable makes it easy to connect your Aardvark I2C/SPI Host Adapter, Beagle I2C/SPI/MDIO Protocol Analyzer, or Cheetah SPI Host Adapter to your target with individual flying leads.
Rosetta Language Bindings and API	The Rosetta language bindings make integration of Total Phase devices into custom applications simple. The API is clean, easy to understand, and can be compiled by any standard compiler.
Beagle Data Center Software	The Beagle Data Center Software provides easy access to all of the features of the Beagle Protocol Analyzers. Within minutes, developers can make full use of USB, I2C, SPI, and MDIO functionality.